Electrical Review

Vol. 79—No. 9. CHICAGO, SATURDAY, AUGUST 27, 1921. Page 299.

Stimulating Appliance Business With Specialties

Demonstration of Exceptional Electrical Devices for the Home in Store or Show Window of Any Contractor-Dealer Always Results in Increased Demand for All Useful Household Devices

By MAJOR LATHROP COLLINS

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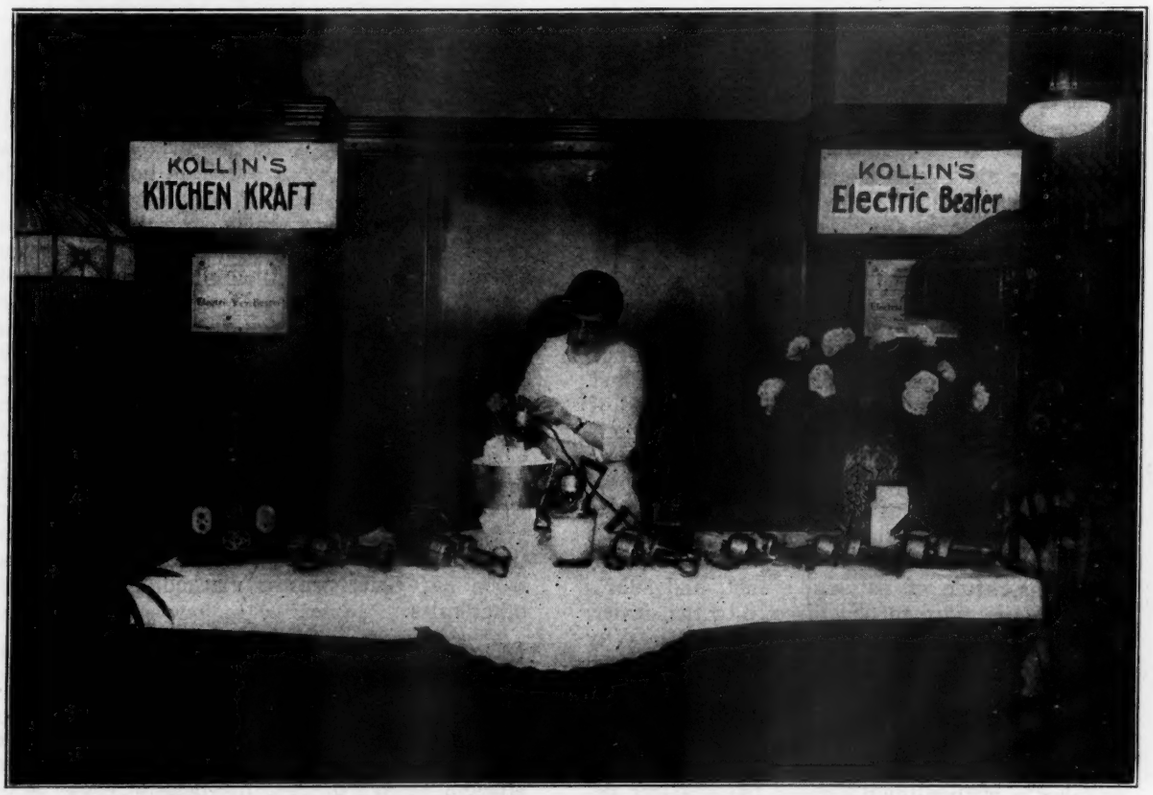
Perhaps few dealers have given much thought to the relationship that exists between the manufacturer and themselves, and the viewpoint here presented may seem a novel one to those who have not heretofore analyzed the problem. The harmony of a correct position will repay a little shaking up and once mutually understood, our trade family should henceforward live most happily. The faults of most people are not corrected because the remedy has never been thought out and so it is with groups of people who form mistaken habits of conducting business. Often it requires an unpleasant jolt to awaken us from habitual lethargy, and, not until we have reformed improper methods, do we reach the point where we are grateful for the words that provoked our progress.

Marketing a specialty is a co-operative process, depending upon the associated interests of the manufacturer, the dealer and the advertising mediums which bring them together. Each member of the alliance is equally responsible for the result and should accept his share of the work entailed with concentrated zeal, personal under-



This Demonstration of a Specialty, If Staged in Any Electrical Store or Show Window, Would Greatly Stimulate Business in All Lines of Household Appliances.

standing and real joy in bringing his individual skill into perfecting a new industrial success.

The electrical appliance manufacturer is usually awake to the fact that his part requires originality, expert designers, technical specialists, careful experimentation and perfect execution before the specialty is ready for marketing, and the modern manufacturer also acquaints himself with the conditions governing the dealer, offering either correspondence courses in salesmanship or co-operative suggestions for the individual.

The advertising expert takes his place in this specialty association and becomes a valuable member and advisor through his constant touch with other manufacturers and dealers who are handling similar problems. He offers not only the advantage of experience gained through familiarizing himself with every angle of the trade but seeks to solve every knotty point and to harmonize the entire effort. His most important service undoubtedly directs itself toward the dealer and few of them can maintain success without the benefits of the trade journal. Those alive to their opportunities recognize the fact that the trade journal informs them of their source of supply and inspires them to renewed efforts in disposing of it.

Share of the Dealer in Profitably Promoting an Electrical Specialty.

Every electrical specialty that fills a real human requirement, especially if it be a labor saving device, is from the outset a success, but the length of time in which it grows to be a financial success depends entirely upon the character of the dealer. Each year, numbers of these potential successes are launched by manufacturers of electrical specialties and their value and operative success is guaranteed. Without the progressive element thus presented dealers would not long succeed.

With the aid of his trade journal each dealer may tip back in his chair and deliberately choose those specialties, the marketing of which will form his path to financial success. In effect, he becomes associated personally with—he has a proprietary interest in—every electrical appliance factory in the country. The work of these factories is designed to fulfil his requirements. They offer him joint livelihood with them. Their creations are aimed to perfectly meet the needs of the community he serves. He becomes their hands through which to dispense their wares to the consumer. They employ experts to report upon the condition of the field that the dealer may benefit by every suggestion made. Fortunes are advanced in publicity work and in special campaigns, often of national extent, and subsequent inquiries are turned directly to the dealer. They "father" his efforts in every sense. Why not expect an assumption of obligation toward them?

In return, the dealer tips back in his chair and scans the columns announcing the latest specialties; and cautiously, and many times skeptically, he takes a chance upon one or two. After delivery of the article to the dealer, many times it happens that the manufacturer, parent-like, waits patiently a long season through for news.

If the dealer were to follow the production of an electrical specialty from the time its first creative idea was conceived and to witness the serious work required of large numbers of trained minds—the investigation and experimental efforts involved, the time and money consumed in obtaining a perfect result—and to know the eagerness of the manufacturer and the satisfaction with which the finished article is finally placed in his hands, the indifferent manner with which this same dealer sometimes sets it casually in his window or lays it upon his shelf, would shamefacedly give place to an attitude of responsibility and of resolve to crown these preliminary efforts with financial success. He has appointed himself a dealer and has voluntarily become a part of the alliance of trade. It is not alone the manufacturer's specialty, nor is it his specialty; it is jointly theirs.

Specialty Sale Often Paves Way for Disposal of Other Devices.

The market depends alone upon the originality and zeal of salesmanship. My friend, the dealer, you are self-elected! The marketing of the electrical specialty depends upon you. The manufacturer is hopefully awaiting your activities and the trade journal upon your desk has eyes. Set yourself to the task and re-establish business conditions in your immediate locality. Take care of your job, for practically the retail sales department of our manufacturing plants are detached from the factory and are operating locally, through you, in every town.

Many a successful dealer today will tell his brothers that a simple specialty has turned his business tide from depression to prosperity. The average dealer will occasionally feel a slump in his business. For one reason or another—sometimes for no reason at all—the trade seems to pass his door without entering, or it turns down another street and he and his salesmen stand idly throughout the day while the turnover refuses to turn and the monster of overhead hovers over the place and devours the few remaining profits.

It is at such times that a special electrical device of a rather unusual but altogether serviceable character can be made to entice back the interest and stimulate renewed trade. Some dealers have concentrated on the vibrator or violet ray, demonstrating them in a window and thereby attracting many housewives—the very persons to whom the dealer sells most of his labor saving household appliances. A number of dealers in Chicago and nearby cities arranged a window demonstration in which several workmen and women assembled electric flatirons just as they are assembled in the factory. This demonstration not only more than doubled the sale of flatirons but there was a marked stimulation of other sales.

Beating the Hard-Times Bogey With an Electric Beater.

Not long ago a number of electrical dealers in New York City procured samples of a decided novelty in the line of electric kitchen devices—an efficient electric beater, for beating eggs, batter, mayonnaise, etc. They arranged window and store demonstrations wherein the new device was used to prepare delicious dainties, an electric grill and oven, or Westinghouse waffle iron, being employed to cook or bake those dishes that

required cooking. The crowds attracted by these demonstrations, and the large amount of business done by the dealers as the result, attracted the attention of the New York *Tribune* institute, which department conducted some thorough tests and investigations which were given to the public in the reading columns of that newspaper.

"This new champion of aching wrists and muscles," says the *Tribune,* "is the 'Kollins Electric Beater,' which costs just about half a cent an hour to use and saves minutes of valuable kitchen time. The device is the familiar Dover type beater, but driven by an electric motor instead of arm power. The motor is not in the least bit cumbersome since it is just about the size of an orange. Aluminum is the metal used for the casing of the motor and as a gear housing at the upper end of the beating strips. Pressed sheet steel is shaped into the handle-bail which supports the black enameled handle. The beating strips and heavy wire stationary frame are of the usual construction. The device, completely equipped, weighs but 2.75 lbs.

"The small motor, with a speed adjustment of

Booth of "Kollins" Electric Beater at Pageant of Progress Exposition, Chicago.

4800 to 8000 r.p.m. (light load), is of the type commonly used in vibrators. In this device the Hamilton-Beach motor is employed. It is a happy combination of lightness, excellent construction and good finish. The speed is controlled by a lever at the top of the motor and this lever is easily manipulated by one finger of the hand that holds the device while in operation—the other hand is free. The motor takes from 25 watts at light loads to 60 watts for heavy work. While the motor is positively secured to the device while in service, it is easily detached when the beater is being cleaned, thus obviating the danger of getting the motor wet and causing later difficulties. A 6-ft. cord is provided for attachment to a wall or baseboard receptacle.

Women Will Go Far to See Demonstration of This Labor Saver.

After a minute description of the beating mechanism the *Tribune* continues the story thus intimately: "When one twirls a hand beater at a pretty fast rate the beating loops rotate at about 1000 r.p.m. High speed on the 'Kollins' gives about 2000 r.p.m. of the beating loops on light duty like egg beating and can be reduced to the requirements of such batter as that used for 'Sunshine cake,' etc. It is possible to beat small amounts, but the 'Kollins' is made in large enough size to take care of such quantities as may be used in hotels, clubs, restaurants, and for large gatherings such as church socials and family parties.

"The first test made by the *Tribune* institute of the 'Kollins' device was the beating of egg whites. It was found a small quantity—two eggs—could be successfully beaten in 2 min. The time increases with larger amounts. It required but 5 min. to make marshmallow frosting, by first beating the two egg whites, then adding the two cupfuls of boiled sugar syrup alternately with two heaping tablespoonfuls of marshmallow crème. While the mixture was still soft the beater was run at half speed, but as the mixture became thicker the speed was increased. When the mixture became very thick full speed was used. The device reduces time from one-third to one-half and positively eliminates work.

"Bouquets for the 'Kollins' on its mayonnaise! In less than 10 min. a pint of delicious, smooth, stiff mayonnaise was produced by this beater. As it stiffens one can increase the speed of the motor and add oil and vinegar very rapidly, so that time for making a quart or even a larger amount would not be greatly increased. A second experiment with the 'Kollins' on mayonnaise showed a gallon of oil (16 cupfuls) used up in 10 min. In the case of the making of the gallon of mayonnaise, which was actually done on behalf of *Tribune* Club's chef, the vinegar, mustard, salt and pepper were added to the 12 egg yolks before any oil was used, and then the oil was added very rapidly. This is a handy thing to know for church socials, club picnics, afternoon tea, etc. A quart of cream was beaten in less than 5 min. Almond kisses were quickly made, and were delicious, thorough beating being the secret of success.

"If it were necessary to beat up large quantities of flour and water for soups, etc., the electric beater could find no better use. For light batters, such as waffles, pancakes and other light mixtures, and for many kinds of cake batters, it is excellent. A batter for popovers was beaten in 5 min. and light, crisp hollow shells were the result."

Let any dealer, after reading the above report, establish a demonstration of this device in his store, and notify the women of the neighborhood; he would soon become popular and his store would do a rushing business. In a beater of this nature the motor must be sufficiently powerful to fulfill its promises in the heavier batters and other mixtures. The motor on this beater is of such a type. If the dealer will supply himself with a quantity of recipes for things which could be made with the use of the beater, he would largely add to his prestige.

There are a sufficient number of devices in the specialty line now on the market so that an alert dealer could have a demonstration going on all the time, thus maintaining the neighborhood interest in his store and in the other appliances he has for sale. By watching the columns of his trade journal the dealer can discover any number of such business building devices. The success of the "Kollins" beater mentioned in such glowing terms by the New York *Tribune* above, was

due principally to a campaign conducted recently by the manufacturer in the columns of ELECTRICAL REVIEW and its Contractor-Dealer Supplement, ELECTROCRAFT, which reached every electrical contractor-dealer in the United States and Canada, resulting in the assured merchandising success of the device.

ELECTRICAL DEVICE DISPLAYED TO ATTRACT ATTENTION.

Comely ladies in attractive gowns would find it hard to vie with "Violet Ray," who, in the form of an electrical machine, has taken up her position on a rostrum in a New York electrical dealer's show window. She holds court on a busy thoroughfare in the downtown section of the city and

Display of Violet-Ray Outfit in Electrical Show Window in New York City.

comes right through the glass of the window to touch the hands of the passersby, who pause long enough to meet her.

"Violet Ray" is a vibratory, high-frequency electric current. She emerges from a coil containing miles and miles of wire, through a glass tube and causes a very pleasing sensation to all who come in contact with her. She is heralded far and wide as being ever ready to relieve rheumatic pains and aches, as well as other ailments. She sets tired blood cells in action and relieves fatigue. Here, in her court, she greets hundreds of folk who have never had the opportunity of making her acquaintance before and the tired business man who meets her during his lunch hour, or on his way to the railroad station, carries the story home to his wife and kiddies and the first thing they know a day comes when the pay envelopes have been passed around and "Violet Ray" takes up her abode in their home.

In arranging to have the electrical lady meet as many people as possible, R. Randel, appliance expert of the Continental Radio & Electric Corp., has placed "Miss Violet Ray," in the form of a glass tube, upon the pinnacle of a brass tube, as shown in the accompanying illustration. Instead of connecting the plug of the violet-ray outfit directly into a lamp socket he has put a flasher in the socket and screwed the plug into the flasher. The result is that the violet rays are turned on for a minute or two and are then automatically turned off. The idle period allows the contacts to cool off and permits one who has been introduced to the lady to move on and give place to another.

GOOD BUSINESS FOR DEALERS AT COUNTY FAIRS.

"The approaching fair time offers electrical dealers remarkable selling opportunities through novel demonstrations," says a writer in a recent issue of the house-organ published by the P. A. Geier Co., of Cleveland, manufacturer of "Royal" electric cleaners. "Every state fair, county fair, church fair and carnival opens up business-getting avenues that lead to handsome sales for dealers so located that they can take advantage of these opportunities."

The wideawake dealer realizes, of course, that in a fair he has keen competition from the noisy popcorn and peanut vendors, the vaudeville performances and the "barkers" of innumerable other wares besides his own. Not only will these boisterous sound-makers lure away his prospects if he lets them, but he must also compete with noisy colors—a riot of them, in fact. Consequently, the successful attention-getting electrical booth must blaze with color decorations artistically blended to please the eye. A successful attention-holding scheme is the linking of your noisy colors with novel demonstrations. Through this method you can keep a crowd in front of your booth almost continuously.

One live-wire "Royal" dealer glosses the coats of the cattle before they go in after blue ribbons. Several prizes were won last summer by live stock with highly glossed coats resulting from a "Royal" cleaning. Another effective stunt of this clever dealer was the cleaning of baby buggies and he even, with a long extension cord, cleaned nearby automobiles. Then he removed the dust from the clothes of the interested spectators and continued beyond their feet to the bare floor, which he cleanly "swept" with the utmost ease.

It is stated that the novel dealer-helps outlined in the Geier publication will aid the electrical merchant to pull electrical orders at the fairs and the dealer who carries them out successfully will, during the next few months, materially increase his 1921 sales.

RIGHTS OF PUBLIC UTILITIES IN ITALY.

In Italy electric service companies have the right of eminent domain. Transmission lines can be erected over the straightest and shortest course, arrangements being made for fixing the price of the land so utilized and of all litigations that may arise. This law is said to work very satisfactorily and has facilitated enormously the distribution of electrical energy.

Development of Washing Machine Markets for Dealers

Discussion Before Electrical Contractor-Dealer Conference of National Retail Congress in Chicago, Aug. 4-5, in Which Vital Problems in Merchandising of Electric Washers Are Elucidated

By E. B. SEITZ

Secretary, American Washing Machine Manufacturers' Association.

In discussing the merchandising problem of any industry consideration must be first given to the product itself; how long it has been on the market, what value of business its sale has erected annually, what the present and future demand is believed to be and the ability of present prospects to buy. While one does not have to sell many suspension bridges in a year to justify continuance in business, yet it is essential to know the probable number of streams remaining to be bridged and the contracts that are imminent. Volume of sales and a reasonable assurance of a continuous demand for a reasonable volume are necessary before there is real interest and enthusiasm in merchandising any article, large or small, expensive or cheap. It is the law of barter and trade since the world began.

There Is a Clean Clothes Problem to Be Found in Every Home.

In defining the field for washing machines we must remember that "wash day, like the poor, we have with us always." Since the day of beating clothes at the river bank the clean clothes problem has been ever present in every home. We have evolved through many changes of method until we have finally come to the solution of that clean clothes problem in the modern washing machine. But this evolution has taken centuries. One can estimate the progress of a country by ascertaining how the people of that country seek to solve this clean clothes problem. Where women's drudgery is accepted as a matter of course, they still gather at the river.

Since the clean clothes problem is in every household—the members of which it is assumed all wear washable clothing—and since there are in the United States 22,000,000 homes, that is the field.

Clothes soil in hard times as well as good, in all seasons and all climes. The life of clothing is a far more serious item in times when the family budget must be stretched and stretched, and while economy of time and hired labor is always to be considered, never has it been a matter of more grave importance and consideration than now.

Labor Saving Devices for the Man vs. Those for the Housewife.

No matter what phase of man's activity you turn to today, you will find that the inventor's ingenuity has been ever busy making the daily toil easier. Compare the modern business office with its typewriters, adding machines, mimeographs, multigraphs, electric typewriters, comptometers and card index systems, with the office of a century ago with its goose quills and sand boxes. To one following agricultural pursuits, the tractor, binder, gangplow, thrashing machine, drill, cream separator and milking machine are a gigantic step from the days of the single plow, the cradle and the flail. The modern shop with its automatics, its electric and air chucks, its lathes and gigs, its presses and dies is a far reach from that of the anvil and forge.

But man's inventive genius has dwelt largely on labor saving devices for man and his activities. True, the modern range has succeeded the dutch oven and the open fireplace; the sewing machine has supplanted the tedious hand work of the housewife; the vacuum cleaner has taken the place of the broom; but the greatest single invention for lightening the burden on women's shoulders has been that which solves her ever present problem—

Demonstration of Cylinder Types of Clothes Washers Before Classes in University of Purdue, Ind.

Demonstration of Agitator and Dolly Types of Washers Before University Classes at Purdue, Ind.

how to have, without drudgery and with economy, clean clothes for every member of the family. It is woman's right to demand for her household that which will save drudgery, lengthen the life of clothing and do much to contribute to the health of the members of her family. With this thought, the head of every household's management is a prospect.

There are approximately 2,500,000 washing machines now in use. This figures that, of our 22,000,000 homes, one in every nine has a washing machine. This is an ideal situation from the viewpoint of merchandising—enough machines in use to truthfully say that the washing machine idea is sold and eight-ninths of the houses are still in open market. And with what rapidity has the washing machine idea spread? In 1916 there were $7,000,000 worth of machines sold; in 1917, $11,000,000; in 1918, $24,000,000; in 1919, $50,000,000, the same being the volume in dollars for a million machines; and in 1920, $85,000,000, or 880,000 machines.

Why Washing Machine Sales Are Easier Now Than Five Years Ago.

(1) The influence of satisfied users.—Every dealer knows the trade expansion quality of a satisfied customer. A machine that is giving satisfaction sells other machines. The real merchant keeps an accurate record of all his sales, and in the larger cities, a spot map showing the location of his sold machines, and makes those machines silent salesmen for his organization.

(2) Washing machines are no longer an experiment.—Predictions are always made in the earlier days of production of most articles that the article is impractical—a fad—or that its use will be of but temporary duration. Those predictions were freely made concerning the electric washer in the earlier days of the industry. Now the practicability, permanency and economy of the washing machine is accepted as a matter of course. Formerly a housewife felt that she needed to give an explanation when she purchased a washing machine. Today the absence of one in the home is usually attended by an alibi.

(3) Better machines are always produced for a buyer's market.—Any industry that is manufacturing for a seller's market is handicapped most seriously in the obtaining of raw materials, inefficiency of labor and by the persistent demands for delivery in excess of the schedule of production. Our industry has gone through this period, but never, now that we have reached a buyer's market, has our product been as carefully made and as rigidly inspected.

(4) Competition is cleaner.—The sales methods of a few years ago were most questionable. Claims were made for machines that today would be laughed at. This is undoubtedly attributable to a general ignorance of the product itself. The influence of the Federal Trade Commission has worked miracles in the ethics of salesmanship.

(5) Replacements.—Only a few years ago all sales were original sales, but in merchandising our product today replacement is becoming quite a factor. Machines will wear out. The average life is placed at about 7 yrs., so here again the value of sales records by card and index system will be worth their keeping.

(6) Standardization of guarantees.—In merchandising machines in the earlier days of the industry the dealer was forced through offers of competitors to make guarantees that were unjustifiable. Of course the guarantees of long duration led to enormous servicing costs. Today there is an almost universal uniform 1-yr. guarantee issued.

(7) The channels of distribution are more sharply defined and understood.—In the pioneer days of our industry there was a feeling by most every merchant selling our product that washing machine distribution belonged solely to them and they resented seeing a merchant of a different line take on washing machines. Today it is generally accepted by the hardware merchant, the furniture dealer, the specialty shop man, the department store manager, the electrical contractor-dealer and the public service corporation salesman that he has no sole patent for the distribution of appliances and that he will stay in the game only so long as he gets results.

(8) The wonderful job of advertising that washing machines have received.—For the first time as far as I know the total figures of the cost of advertising washing machines nationally are made public. This refers to the advertising in nationally distributed magazines. In 1918 the industry spent $17,320; in 1919, $437,884, and in 1920, $1,213,912. In classifying money spent in advertising, it is generally accepted that for every dollar spent in magazine advertising, two are spent by direct mail advertising and four in newspaper advertising, and that about one-half of the amount spent in magazine advertising is spent in business and trade journals. This ratio applied to our magazine advertising sum would make the sum of $8,537,928; but to be ultra-conservative, take only one-sixth of that amount and we have a sum of $1,422,321, which, added to the magazine advertising fund, would make a total of $2,735,235, which I think is a most conservative estimate of the amount of money spent in advertising the washing machine idea in 1920. It is a generally accepted statement that the total yearly sale of all advertised goods is about $90,000,000,000, and that the cost of employing advertising as a sales force is about 1.5%, but in the washing machine industry there was spent for advertising in 1920 at least 3.2%.

This advertising, it is to be noted, has been for the benefit of the industry as a whole because, due to the newness of our product, practically all copy has been written about the washing machine idea rather than any washing machine in particular. All have received benefit from it. These advertising accounts have been handled by some of the very best advertising companies of the country and, on the whole, it can be truthfully stated that no specialty in recent years has been given the publicity that the washing machine has received.

(9) The educational advertising of commercial laundries.—This may sound like a paradox, but the fact still remains that the importance of sanitary washing, of family unit washing and study of fabrics that has been given such publicity by the commercial laundries and laundry owner association has reacted much to the benefit of the washing machine idea.

(10) The increasing interest of home economics groups.—It is estimated that the servant scarcity during the war gave at least a 10-yr.

impetus to the development of our industry. It forced housewives to consider the clean clothes problem as never before; that is, by personal contact with the actual solution. In addition, it gave greater dignity and self-respect to doing one's own work in one's own home.

(11) The increasing interest of home economics groups.—Up until a few years ago, great stress was laid by home economics teachers on cooking and sewing. Recently they have become actively concerned in the clean clothes problem as solved by laundering at home. The instructions received by the girl studying home economics in the university, college, normal school or high school are becoming powerful factors in carrying the use of washing machines into the home. A number of our leading universities are now conducting research work on the subject, "Laundering at Home by Means of a Washing Machine." They are studying waters, soaps, water softeners and washing methods. The educational value and the far-reaching effect of this is inestimable.

Publicity in Women's Journals Creates Demand for Washing Machines.

(12) The help of women's magazines.—Much editorial space has been given in the last several years by women's magazines to the subject, "Laundering at Home." The enormous circulation of these magazines carries the message to every city, hamlet and countryside of our nation. A single reference to a series of bulletins issued by our association appeared in the current issue of one of these nationally circulated women's magazines. In 10 days since its appearance we have received 1482 inquiries, all personal letters concerning the bulletins and how a set might be obtained.

(13) Work of the Society for Electrical Development.—This organization has not overlooked the importance of electrical appliances, and its splendid staff is contributing much in the way of publicity through hundreds of newspapers throughout the country. Electrical pages which appear in many of our leading papers weekly owe much of their copy to this Society.

(14) Government aids.—The Government has an organization which places in a great many counties of the various states a home demonstration agent whose duty it is to advise with women on household problems. The women of the various counties are organized into clubs meeting at regular intervals to study matters of household management. During the current year one of the major subjects of that study is the home laundry. This is creating markets for the present and future.

Oscillator and Vacuum Types of Clothes Washers Being Demonstrated to Classes at University, Purdue, Ind.

(15) Low cost of a washing machine.—It has been proven time and again that there is less spread between the factory cost and the cost to the buyer of a washing machine than of any other specialty. The public is just now beginning to realize that there has been no profiteering in our product, either during the war or since, and it is a powerful argument in present day sales.

(16) Installment payments.—The agency of selling on the part-payment plan is available to every dealer and each month sees an increasing amount of machines sold by this convenient plan. It makes possible sales that could not be made on a cash basis.

Valuable Suggestions to Dealers in Electric Washing Machine.

The following suggestions are offered as admonitions which, if followed, should result in a larger number of sales:

Know your product and the most approved washing methods. A machine is not well sold that is not well used, and intelligent salesmanship will result in the lessening of servicing costs. There have been too many machines poorly sold. Perhaps that is a curse of a seller's market, but instructions on not only the mechanical features of the machines, but on the washing methods too, will save the number of subsequent calls at the home of the purchaser. Again, it must not be ignored that a poorly used machine, which makes in the end a dissatisfied owner, will more than offset the advertising advantage that comes from a score of perfectly satisfactory machines.

It is foolish to "knock" your competitor's machine. So much has been said in recent years of the folly of "knocking," and such stringent rules have been laid down by the Federal Trade Commission, that it is perhaps unnecessary to more than mention this point. Of course your competitor's machine will wash. If it didn't it wouldn't be continued and couldn't be sold. To throw a cloud of doubt around a competitor's product will engulf your own. The normal buyer, when he hears the other machine overly criticized, has an instant desire to go to your competitor and find out what is wrong with your machine.

Heroic sales efforts are now necessary. Much has been said about the buying public and these heroic days, but the fact remains that during the last 8 mo. it has been proven concerning our product that the results justify intensified sales effort. Thomas A. Edison recently issued the following statement: "I have been through five depressions during my business life. They all act alike. This last one acts like all the rest. The men who if business fell off 66% increased their selling effort 75%, managed to pull through as if there were no depression, and the efforts of such men tend to shorten the periods of depression." The dealer who believes that he can make no sales due to the slump in business is licked before he starts, but the dealer who studies local conditions; who keeps informed on the increase in the savings deposits of his local banks, and if it is in an industrial section, notes pay days and the size of pay rolls; who notes the time of the marketing of crops; who makes a prospect list of the salaried people

of his community and plans his intensive selling campaigns accordingly, can do a 1919, if not a 1920, business.

Continue your sales effort throughout the year. Experience has taught the necessity of a more or less even distribution of sales effort throughout the year. Washing machines are not a seasonal product and the dealer who treats them as such will find an added cost of doing business; i. e., the expense of getting ready for another spasmodic sales effort. Keep hammering and the iron will stay hot. Every time interest is allowed to lag and sales drop off, all of the preliminaries which cost time and money have to be gone through with again.

Make sold machines sell others. The saturation point being so far removed, merchandise your machine with the feeling that every satisfied customer obtained now can be made to bring in at least three additional sales. It is an endless chain projection in which you have eight-ninths of the total number of homes to draw from.

Participate in all local electrical activities and in seeing that fair play is afforded your local public utility companies. Even though the commercial department of that public utility company may be your competitor, always bear in mind that the expansion of the utility company depends upon its income. We have 6,800,000 wired homes in the United States. We could have 14,000,000 if the public service corporations were given a fair return on their investment.

Encourage the installation of farm lighting systems. There are 6,000,000 farmhouses in the United States. Until 1921 about 100,000 farm lighting plants were being installed each year. Every house so equipped is in the market for appliances.

Participate in all activities for home building plans and in model homes. See that adequate electric outlets are provided in these houses to make possible the use of appliances, and see to it particularly that the model home has a complete laundry room.

And "finally, there abideth salesmanship, prospects and service, but the greatest of these is service." Without efficient and prompt servicing, merchandising of appliances cannot long continue. While the cost of servicing can in most cases be materially reduced it cannot be eliminated. But in the final analysis, what merchant would want it entirely done away with—for that occasional call is of great importance in building up the prospect list in that neighborhood.

May we not borrow the Rotarian motto and say that, in all our merchandising, "He profits most who serves best"?

ELECTRIC HEATING APPARATUS AT CHEMICAL EXPOSITION.

The General Electric Co. will have a large exhibit, comprising a variety of its products, at the seventh National Exposition of Chemical Industries, to be held in the Eighth Coast Artillery Armory, New York City, Sept. 12-17. The exhibit will occupy spaces 211-213-215. The features of the exhibit will be an automatic arc welding outfit and a 50-lb. brass melting furnace. The arc-welding equipment will consist of a WD 9, 4-kw., 200-ampere, 60-20-volt generator direct-connected to a 7.5-hp., 2-phase, 60-cycle, 220-volt motor. The set will be in operation welding seams in large oil switch tanks and also doing other miscellaneous work. The brass furnace will be a 50-lb. type SM furnace, completely lined with a crucible and electrodes in place, but without transformers or other electrical accessories. It is representative of a new type of muffled arc furnace recently developed by the company.

Further furnace exhibits will comprise a semi-cylindrical furnace, a small tool room, muffled arc furnace used for treating tool steel, etc., in the shop, a soldering iron furnace for medium and heavy duty irons, and an automatic control board for a single electrode furnace for 60-cycle, 230-volt operation. There will also be a number of small electrically heated devices of various sorts including a self-regulating metal melting pot for nonferrous metals, a compound melting pot, jacketed and jacketless glue pots, a series of electric soldering irons of various sizes, and three examples of a new sheath wire unit just developed. These will include air heater, clamp on, and cartridge type units. Other exhibits will consist of a 2-rivet heater, two field coils for a KT 20-hp. motor showing different styles of insulation, and a high-tension filament heating transformer for use with 250-milliampere, 100,000-volt Kenetron tubes and two 250-milliampere 100,000 Kenetrons.

MECHANICAL ENGINEERS APPOINT MANAGING EDITOR.

The American Society of Mechanical Engineers has announced the appointment as managing editor of C. E. Davies to succeed the late L. G. French, who was both editor and manager of the Society's publication. The June issue of *Mechanical Engineering* contains a symposium of eulogies on the work of Mr. French, including resolutions of appreciation adopted by the council of the Society and by the Boiler Code Committee.

Mr. Davies was graduated from the Rensselaer Polytechnic Institute with a degree of M.E. and for several years afterwards specialized in industrial management work. He became associated with the Smith Premier Works of the Remington Typewriter Co., Syracuse, N. Y., in 1914 and with the exception of 15 mo. during the war was engaged in production work with that company until March, 1920. During the war Mr. Davies was in the Ordnance Department at the Frankford Arsenal, serving as assistant production superintendent on the Artillery Ammunition Division and later as superintendent of the fuse shop. He left the service with a rank of captain. Mr. Davies joined the editorial staff of the Society, March, 1920, as associate editor of *Mechanical Engineering* and assistant secretary in charge of meetings and publicity. The Society thus secured for its increasing publication and extensive meetings one especially trained on large diversified business undertakings.

The difference between opportunity and the kicker is that opportunity knocks but once.

Dealer's Place in Economics of Electrical Industry

Relation of Manufacturer, Jobber, Power Plant and Contractor-Dealer to Each Other in Successful Achievement Is Discussed at Electrical Conference of Retail Congress, Chicago, Aug. 4-5.

By A. I. CLIFFORD

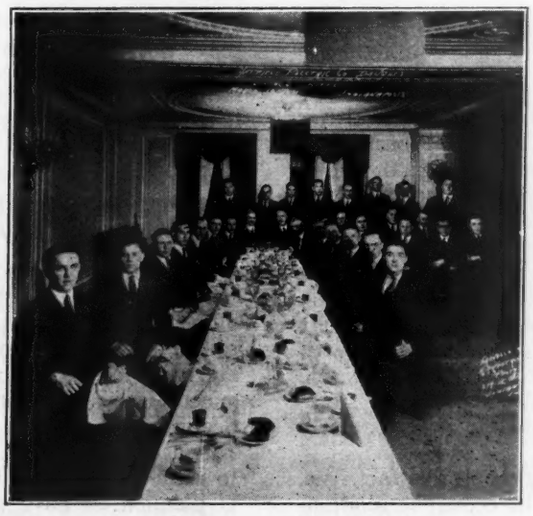
Secretary, Indiana State Association of Electrical Contractors and Dealers.

It behooves us to give serious thought and study to the subject of the economic relationship that should exist in the electrical industry. There are four prominent branches of the electrical industry: The manufacturer, the jobber, the central station and the electrical contractor-dealer; each one of these branches is an important part of the industry, each has its duty to perform and the performance of each one has an economic effect on the other branches of the industry. Therefore, to properly assist the electrical industry as a whole, it is our duty in any branch of the industry to function in a manner that will be of benefit to the balance of the branches as well as our own.

Importance of Each Branch to the Other in Economics of Industry.

The Manufacturer.—The manufacturer, with his warehouses full of high priced material, labor refusing to accept adequate reductions, transportation charges enormously too high, facing a demand from the public for a reduction in price, is in a precarious position and, for a branch as important as the manufacturer to be in such a quandary, is certainly enough to call forth the hearty co-operation of all branches of the industry and to give serious thought to the economic relationship which should exist between the manufacturer and the other branches.

The Jobber.—The jobber, whom some consider a parasite for taking his small compensation for a real service rendered, is in reality a great part of the industry—one that is essential and bears a real economic relationship to the industry. To those who insinuate that the jobber is non-essential, I want to remind them that a successful business is not an accident and cannot thrive as a parasite. The jobber is successful and he is today performing his work in a manner that is very helpful. He is a real necessity in the industry and, with his costs of travel and transportation soaring, together with losses in bad accounts, he is certainly a factor that must have our wholehearted support.



Typical Group of Indiana Electrical Distributors at Get-Together Lunch in Indianapolis.

The Central Station.—Here is a situation that most certainly calls for our untiring support and good influences. I call your attention to the need of our assistance in bringing about a better public sentiment or encouraging the public's buying of central-station securities. You know full well that the central station is one of the greatest factors in all the world in the development of our commercial, industrial and civic activities and, therefore, your attention need not be called to the fact that the central station most certainly bears an economic relationship to the other branches of the industry.

Vision, Faith and Energy Necessary in Industrial and Commercial Relationship.

The Contractor-Dealer.—The contractor-dealer, or shall we call him "Electragist"—the new name adopted for him at the Buffalo convention—meaning one conducting strictly an electrical business, and not a hardware store or department store. Why have I named him last in the list? Because he is the youngest in the group. Yet the electrical contractor-dealer, or electragist, is the most important division in the group because of the fact that the electrical contractor-dealer is the one who comes into personal contact with the buying public which, after all, is the person we are all trying to reach. Therefore, as an electrical industry we owe a helping hand to the electrical contractor-dealer and should support the activities of the National, state and local associations that help him to carry the messages of the hour to the public.

W. L. Goodwin, who has done so much for the contractor-dealer, will tell you that a large number of them are more fitted for the plow than their chosen vocation and that about all some of them know about turnover is to spin a dollar to see how many times it will turn over. That may be and is possibly true but, and Mr. Goodwin will agree, the fact remains that these men must have our assistance to bring them up to the

high level that will permit them to intelligently present to the public the materials of the manufacturer and the reasons for maintaining an adequate central station.

Now, we have briefly cited some of the existing conditions which call for a closer economic relationship. To produce this closer relationship, we as men of the electrical industry need three things —vision, faith and "go." Vision to look beyond the present; vision to see the bright shores of prosperity which loom in the immediate future; vision to see in our industry the great possibilities that do not exist in any other industry in the world.

Every great achievement has been the result of some man's vision. We need vision to look even beyond our industry and into the future of our great Republic. If we will concentrate for a moment on the achievements of our Edison, Westinghouse and others it will give us a better vision into the future of the electrical industry. We need vision if we expect to grow into the wonderful unfolding future that awaits us.

Faith is an essential in every phase of life. Without faith, life—business and social—would be unbearable and an impossibility. We need faith in our industry; a faith that will bring into action the golden rule in the conduct of our business; a faith in the other branches of our industry that will produce confidence and good will towards our competitors. Faith is the most powerful factor in the credit risks of the world. Through faith or confidence the major part of our entire universe conducts its business. Faith is the girdle of strength that will bind us in harmonious solution of all of our problems. Faith is to trust. Faith is confidence; a fidelity to promise; honesty; and God knows that in the electrical industry we need honesty badly. Honesty with ourselves, honesty with our customers, honesty with our creditors and honesty with our competitors. Honesty is the best policy because it hasn't been used enough to hurt it.

In the great world war, many slogans were adopted by our soldiers, but the one that gave the "pep" and the one that never will die was "Let's go!" It seems to me that this is the most opportune time in the history of our industry to use this as a slogan and to live it.

Characteristics and Requirements of Electrical Contractor-Dealer.

As secretary of the Indiana State Association of Electrical Contractors and Dealers, I plead for the support of the National, state and local associations, for I am confident that through the careful, well directed educational campaigns that can be put over by these associations, the man who is delivering your electrical products to the public can be taught to do it in a businesslike manner. We know that the electrical contractor-dealer is the logical outlet through which to market our electrical appliances because of the fact that, with each appliance sold, a service goes with the sale which cannot be given by the department store, hardware store or other stores not regularly equipped for service work.

The manufacturer is recognizing this fact. We, therefore, need to cultivate the economic relationship that should exist between all branches of the industry in order that the electrical contractor-dealer will sell the job or appliance in a manner that will reflect the good name and intentions of the manufacturer.

The electrical contractor-dealer in the main is the product of a man with the tools, and his greatest thought is to sell pipe, wire, knobs and tubes, invariably never charging a cent for his knowledge. He must be taught that the most profitable stock he has to sell is his "knowledge of the business." The association causes him to think straight and act straight and have better than ordinary horse sense. So, let us have an optimistic view of the future contractor-dealer by supporting the organizations which will bring him out of the "kinks." We must make an optimist out of the contractor-dealer by teaching him to see the wonderful future.

In this great period of readjustment, if you are going to be a pessimist, be a real one. Pessimists die young and the sooner they die the sooner the optimists can make some money.

I do not believe it is necessary for me to dwell on the benefit of an organization in any line of business. Some men have said they could not see the benefit of an organization. My answer is, "If you cannot see the benefits of a business organization, then look to yourself for the cause." At least, if we will just do as Sam Jones said, when we come to a meeting bring our rakes and rake in everything that is good for ourselves instead of bringing pitchforks and throwing them over our shoulders to the other fellow, we will eliminate a lot of dirty, common jealousy which is the cause of many a downfall in business.

Belonging to an association of the business with which you are connected costs nothing. The expense of the association should be included in your overhead. The persistent attendance at meetings of your various associations is more essential than the opening of your doors of business.

Now, if I have been successful in bringing to you one thought I will be happy. That thought is this, men, that, "Let's go" means action. I have traveled the great New England States; I have visited with pleasure the western Golden Gate; I have tramped the southern soils and have ridden on the waters of the Great Lakes, but to me no sight in all the world is so beautiful as the waving corn, the ripening grain and the roar of the industries in our great, beloved, Central West. Let us put the "pep and punch" into our great industry in the great Central West that will give it the energy that the slogan, "Let's Go," would suggest.

WATER POWER DEVELOPMENT PLAN IN ALGERIA.

A commission appointed by the governor general of Algeria, which has been studying the use of water power for production of electricity for railways, proposes to utilize the falls of Oued-Agricun, in the Department of Constantine. The execution of this work would permit the electrification of a railway line from Bougie to Setif (about 50 mi.) and another line from Bougie to Beni-Mancour, a distance of about 57 mi. It is planned to have a special commission study further the matter of electric power on the basis of a 3-phase current of low frequency.

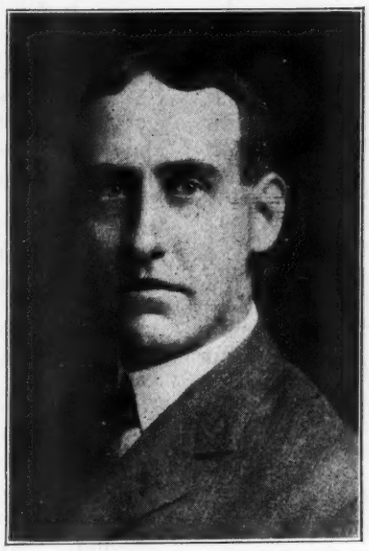
What the National Association Is Doing for Members

Paper Prepared for Electrical Contractor-Dealer's Conference in National Congress of Retail Merchants, Chicago, Detailing Functions and Accomplishments of a Successful Organization

By W. H. MORTON

Secretary-Treasurer, National Association of Electrical Contractors and Dealers.

At the time the National Association of Electrical Contractors and Dealers was organized in 1901, the contractor-dealer was hardly a recognized factor in the electrical industry, hence, the business of the organization has been two-fold, first, to place before the industry the function of the contractor-dealer as a part of the machinery for distributing electrical materials and service, and second, to educate the contractor-dealer to properly perform his function and to recognize the responsibility that it involves. To show what the National Association has done to cover these points it is necessary to go back somewhat over its past history and to give some statistics in connection with its operation.



W. H. Morton.

The National movement started in New York City in 1887. As a result of those activities a state association was formed in 1889. So much benefit was experienced through this association that, in 1901, a call was issued for a meeting in Buffalo to discuss the question of whether a national organization in our trade was an advantage. The country was circularized as to the sentiment toward a National organization with the result that a meeting was called in July, 1901, at which 49 contractors were present, and discussion at this meeting showed that it was necessary that a National organization be created.

At that meeting in Buffalo the cornerstone was laid by these 49 men, 36 of whom are still living and in the Association. In fact we have lost none of the original founders of that association except those removed by death and other unavoidable causes. The original organization has been criticized for lack of results, but it should be remembered in this connection that at that time "co-operation" was not known in the electrical industry. We had to devote our time to educating contractors to treat each other even decently. The following are a few of the accomplishments of the old organization:

We obtained representation on the electrical committee of Board of Underwriters in 1903. In 1906 we recognized for the first time that some of our members were retailers and changed the by-laws to admit them as members. In 1911 we started co-operative work with the National Electric Light Association. In 1912 we worked out a standard chart for conduit size and a universal estimate sheet. In 1913 the first system of bookkeeping for the contractor was published. In 1914 we obtained liability insurance. In 1917 the entire Association was reorganized, largely due to the work of W. L. Goodwin, and too much cannot be said of what Mr. Goodwin has done for the entire electrical industry. He started them all thinking.

At this time we changed our dues, putting them on the basis of each member paying a percentage on the amount of business done. That has been criticized, due to the fact that we changed from a flat rate, but I think it is the fair way of handling an organization of this kind, as the larger the man's business the more he gets out of his organization, consequently the more he should give to the Association and the work in his behalf.

The work of the Association is carried on through an executive committee which directs all the activities. This committee divides itself into the number of standing committees and the work of some of the most important of these is as follows:

The "Architects' and Engineers' Committee" negotiates between the National Association and the engineering and architectural organizations. It is at present at work on the question of estimating from an engineering standpoint. This is educational work that can only be carried on in a national way.

The "Symbols Committee," which has charge of standard symbols for wiring of buildings, developed the first symbols that were brought out some years ago and these are now being revised.

The "Code Committee" works directly with the National Fire Protection Association. This committee has as much to say in the formation of rules and changes in rules as any of the organizations represented in the National Fire Protection

Committee. This committee is of inestimable value in preventing rules from being adopted that are not practical. There are many cases where rules are suggested by some branch of the industry that read all right but when considered from an installation standpoint are impractical.

Collection of Cost Data of Vital Importance to Every Contractor-Dealer.

The work of the "Cost Data Committee" is chiefly to get at the costs of electrical installations. This committee has been working for 4 yrs. against a tremendous handicap because cost data on installations is not kept with uniformity by contractors. The work of this committee is to educate the contractor members of the organization to keep their data in uniform shape so that it can be collated and statistics built up that will give the data wanted. It is a big task. It is educational and must go slowly. Contractors will be asked as time goes on to keep their data in accordance with suggestions of this committee and, while it may not agree with their ideas on the subject, it is hoped that they will do it so that we can call on the whole country for data of a uniform nature, and from which figures will be derived that will benefit the whole industry.

The "Credit and Accounting Committee" work is very closely related to that of the Cost Data Committee. It is doing a very valuable work and one that is building up better merchants. We found from our experience of cost accounting that after we had devised a standard system it was too big for many in the retail business. Our next step, therefore, was to bring out our new "Business Record," which was adopted at the Baltimore convention in 1920, and is very simple. It is a single entry system that can be balanced. It gives the user the fundamental information that he desires to have in regard to his own business and is sold to members of the Association at $9.75 and to non-members for $12.50. It is so arranged that one can easily change to the "Standard Cost Accounting System" when the business grows.

The subject of accounting leads to the important matter of "overhead," in which is involved the question as to whether a proper sum has been added to the cost before quoting a price to the consumer. Between your purchase price and the price at which you sell there must be a margin sufficient to cover your "overhead" and give you a reasonable profit. We have got to show those in the manufacturing industry the actual conditions in our business so that they may see what it costs us to handle their goods. We must prove to them that we are not covering up inefficiencies and poor business methods, and the only way we can do that is by getting this data from all sections of the country, which is very difficult unless uniform accounting methods are in use.

Means Being Evolved to Solve Dealers' Problems of Overhead.

A questionnaire goes out once a year on the subject of "overhead." It has been compiled very carefully and every question asked is with a definite purpose in view. There is no question that cannot be answered very easily if you are handling your business properly, and from the replies we compile statistics that are a help to all electrical merchants.

We had placed before us in Baltimore, by Mr. Goodwin, now manager for the Society for Electrical Development, a startling chart dealing with the subject, "Profits in the Retail Business." His proposition was this: "Gross profit (which might better be called margin) minus overhead, divided by the merchandise account (stock) at cost plus accounts receivable at cost, both expressed as equal to so many average days' sales, multiplied by the number of sales days in the period studied, equals the percentage of profit on the capital invested.

"Expressed in mathematical arrangement this formula is:

$$\left[\frac{\text{Gross profits} - \text{Overhead}}{\text{Merchandise account} + \text{Accounts receivable}}\right] \times \left[\begin{matrix}\text{Number of}\\ \text{sales days}\\ \text{in period}\end{matrix}\right] = \left[\begin{matrix}\text{Percentage of}\\ \text{profit on capital}\\ \text{for the period}\end{matrix}\right]$$

"Thus, if gross profit 30% minus overhead at 27% divided by the sum of 30, representing 30 days' sales of a stock of $30,000 at $1000 per day at cost plus 30, representing accounts receivable to the amount of $30,000 also as equal to 30 days' sales at cost is multiplied by 360, representing $360,000 worth of sales, at cost, per year, or $1000 per day, the profit for the period equals 18%."

Putting these figures of Mr. Goodwin's into his formula, we have:

$$\frac{30-27}{30+30} \times 360 = 18\%.$$

"If the stock is increased to a 60 days' supply and the accounts receivable is increased the same amount," says Mr. Goodwin, "the turnover lessens and the net profit at once falls, as:

$$\frac{30-27}{60+60} \times 360 = 9\%.$$

"Of course, it is not necessary that in each case the accounts receivable should increase in the same direct proportion as the stock, but in actual business such is what frequently happens.

"Now, going back to the first equation, if the percentage of gross profit (margin) is increased but overhead not changed, we have:

$$\frac{33-27}{30+30} \times 360 = 36\%.$$

"But, with even the better margin of 33%, if the stock carried and accounts receivable are increased and the turnover likewise lessened, the net profit on the capital for the year continues to fall, as:

$$\frac{30-27}{60+60} \times 360 = 18\%.$$

"With the gross profit (margin) remaining at 33%, but by lowering the overhead, in the first equation with the low stock plus low accounts receivable, we have a great increase in the percent-

age of the profit on the invested capital for the year, as:

$$\frac{33-25}{30+30}\times 360-48\%.$$

"But again, if turnover is lessened even with this increased margin and a smaller overhead, the net profit for the year falls, as:

$$\frac{33-25}{60+45}\times 360=27\%.$$

"Hence, it is evident that overhead plays only a part in deciding the annual net profit, and that turnover plays a far larger part.

"To state it more generally, the annual profit falls when larger stocks accumulate, when the accounts receivable are not collected promptly, when expenses increase and when gross margin is reduced. Likewise, the annual profit climbs when the gross margin is increased, when the accounts receivable are collected promptly, when turnover is increased and when expenses are cut.

"The relationships are the elements in the problem which must be studied by retailers, jobbers and manufacturers in the setting of margins. It is up to the retailers, in their effort to obtain larger margins, to bring forward not only figures showing what overhead amounts to but also figures on stock carried, on accounts receivable, on turnover and on profit on capital for the year. All are involved in the setting of a fair margin."

The "Universal Data and Sales Book Committee" is in charge of the book which we publish under that name and which gives you under one cover complete details on most articles of ordinary use in your business, and it gives this in a form that enables you to use it as a cost book, an estimating book or a selling book if properly used. In the back of the book we give you engineering data and include a reprint of the National Electrical Code. It is my opinion that the contractor can take that book with him on a hurry call and estimate a job from that book.

The merchandising end is further taken care of by special sheets in the front, giving a condensed list of articles you sell over the counter every day, and a pretty complete comparative list of all the different appliances ordinarily handled by the retailer.

The work of the "House Wiring Committee" is of a very general character. That committee works principally with the National Electric Light Association in getting out plans for securing residence lighting. At present the committee is working on a plan for co-operative advertising campaigns embracing central stations, jobbers and contractors.

The "Publication Committee" operates the *Electrical Contractor-Dealer,* a much criticized and much thought of monthly magazine, and this publication produces one-half of the revenue of the Association.

It has been claimed that the Association should not publish a magazine in competition with other trade publications; but I would like to point out that when this paper was started there was no othere trade jurnal in the field to do the pioneer work. Perhaps it would be unwise for an association of this kind to start publishing a paper if there were well organized and established trade journals in the field at the beginning, but in this case it was a different thing altogether.

The "Labor Committee" represents a movement that has not, I think, been attempted by any other trade. We had a committee of five which met with a committee of five representatives of the International Brotherhood of Electrical Workers. Their first act was to adopt a set of principles and then form a National Labor Council to get those principles adopted as a basis for agreements between the employers and the employes. The Council also performs a valuable function in the settlement of differences between employers and employes and has successfully adjusted a number of such differences in the past year.

The "Trade Policy Committee," forms a sort of clearing house for the Association. It is composed of the chairman of the manufacturers' committee, the jobbers' committee, the central stations' committee, and the merchandising committee. It deals with broad policies affecting the entire trade.

The Membership Committee acts entirely on the question of getting members. On June 1, this year, we had over 2300 members in the National Association, which represent 457 cities located in 47 states, Canada and Mexico. When you consider that these members represent over $100,000,000 worth of business (gross) and over $54,000,000 worth of supplies bought, it is a pretty representative organization.

As already pointed out, the work of the National Association is and must be largely educational, but, broadly speaking, it has improved the feeling in the trade between its membership and the manufacturer, the supply jobber and the central station. It has shown how to be more efficient and how to get a reasonable profit, and by making use of the material furnished big benefits can be derived from the National Association.

All of this work has tended to improve the position of the contractor-dealer, both as an installer of electrical material and as a retailer of electrical appliances and devices, and it can be said without fear of contradiction that it has and is improving the contractor's opportunity as a business man.

STANDARD ACCOUNTING PLAN THAT INSURES MORE PROFIT.

Solution of Merchandising and Contracting Problems May Be Found in System Based Upon Quicker Turnover of Accounts.

By V. G. Fullman,
Steel City Electric Co., Pittsburgh.

The remarkably favorable effect that quicker turnover of accounts receivable has on net profit is not generally appreciated by manufacturers, jobbers, dealers or contractors. For instance, if gross profit is 33%, overhead 30%, merchandise turnover 90 days and accounts receivable turnover 90 days, then the net profit will be about 6%. If the accounts receivable turnover is cut down to 30 days by efficient credit management and quick collections the net profit will be about 9%, or

approximately 50% increase in the amount of the net profit.

We all know that there are entirely too many business concerns that are not making a sufficient net profit to enable them to pay their bills promptly. Possibly, in the large majority of such cases this condition could be corrected if these concerns knew, by means of efficient accounting, exactly why they were not making a sufficient net return on their investment.

Realizing the deplorable lack of proper accounting in electrical contracting with its train of reckless competition, under-bidding, inefficiency, "slow-pays" and bankrupts, it became apparent that a uniform system of cost accounting would of necessity have to be planned and devised to correct this serious condition and to promote the best interests and progress of the electrical industry.

After great labor, numerous conferences and at heavy expense, a complete but simple system of accounting was evolved and placed on sale by the National Association of Electrical Contractors and Dealers, 15 West 37th street, New York City.

Various plans and considerable publicity have, however, so far failed to bring about a reasonable sale of this "Standard Accounting System" and, naturally, this has been a keen disappointment and discouraging to those who labored so long and selfishly in perfecting the system.

Apparently the necessity for better accounting methods is not fully appreciated or the publicity has not reached the concerns or individuals that should be vitally interested for their own good.

It is not the wish to comment upon or criticize the previous plans or publicity to promote the adoption of the "Standard Accounting System," but rather to applaud any and all previous efforts by those that have this subject at heart. No particular plan will bring complete success and all should strive in their own way by personal work and suggestions to help the good work along.

Publicity Campaign Desirable.

My plan provides for a campaign of publicity to be carried on by those that are in touch directly and most frequently with the concerns or individuals that are "slow-pay" and who apparently have serious need for the "Standard Accounting System," namely, the credit managers of the electrical industry who are responsible for the extension of credit to "slow-pay" customers and the final collections or losses on such "slow-pay" customers.

All credit managers must realize their obligations to the electrical industry and co-operate religiously to improve the conditions which make the adoption of the "Standard Accounting System" so urgently desirable. A strict adherence to the canons and ethics of their profession must be fostered and maintained.

And who, other than the credit managers, can approach the "slow-pay" customer on this subject in such a forceful and unique way? The recommendation of the credit manager in such instances amounts almost to a command, and when the recommendation comes from the credit managers of all the creditors it will have a cumulative and powerful effect on the making of a quick decision by the debtor, because he knows that being obstinate or recalcitrant may endanger his credit standing. And credit managers are fully justified in withdrawing credit courtesies to debtors who refuse to adopt the "Standard Accounting System" or an equally efficient system and continue to be "slow pay." In fact, if they do not withdraw the extension of credit to such debtors they are violating the ethics of their profession and working an injury that affects unfavorably, directly or indirectly, every concern in the electrical industry.

In order to promote this plan it is necessary that the credit managers be provided with suitable "stickers" for attachment to statements and collection letters. Attractive leaflets or folders properly illustrated should also be provided and credit managers should occasionally send a circular letter to all "slow-pay" customers, explaining the numerous advantages to them and to the industry, derived by the adoption of efficient accounting and the prompt payment of accounts.

The final object to reduce the number of "slow-pay" customers should be nearer accomplishment with each succeeding month and the credit managers should become more insistent each succeeding month in urging or demanding their "slow-pay" customers to adopt the "Standard Accounting System" at the risk of a curtailment or elimination of credit if they do not comply.

Complaint has been made that when the "Standard Accounting System" has been installed, it is not properly kept up by the contractor. This is purely neglect and lack of interest on the part of the contractor and, if he continues "slow-pay" after installation of the system, he should be given short shrift by all credit managers. The system should not only be installed but used consistently and efficiently.

The National Association of Electrical Contractors and Dealers will furnish all credit managers, upon request, with the necessary supply of stickers, leaflets, etc. Every credit manager should consider it a special obligation to assist in this work and to co-operate with his fellow credit men. If only a comparatively few credit managers work according to this plan failure will surely result.

It is also suggested that when a contractor installs the system he should indicate this fact prominently on his purchase orders. A suitable rubber stamp should be included with the system for this purpose.

Contractors who have efficient accounting systems, and who have suffered from irresponsible competition in the past should be urged to demand the co-operation of all salesmen who call upon them in the establishment of uniform accounting and estimating methods or systems. In other words, it is not fair for a jobber or manufacturer to solicit or take orders from the "slow-pay" contractors who figure jobs below a fair margin of profit, due to lack of proper accounting or estimating methods.

Credit men should also use great care in extending credit to newly organized concerns, to make sure they are properly equipped with capital, capable management, experience and other necessary requirements for the foundation of a successful enterprise. Such concerns should be convinced, right at the start, of the necessity of the "Standard Accounting System" before credit is extended.

Advertising Service for Smaller Electric Shops

Recognizing the Necessity of Local Advertising in the Contractor-Dealer Field, and the Limitations of the "Little Fellows," One Sweeper Company Provides Effective Service for Meager Purses

By G. A, POWERS, JR.
Advertising Manager, Pneuvac Company, Worcester, Mass.

For some few months to come the electrical appliance dealer must realize that forced sales are to be the order of the day. There's business to be had but it must be gone after. As proof of this it is interesting to know that when business was at its lowest ebb a company manufacturing vacuum cleaners in Worcester, Mass., proved that "1921 is rewarding fighters" by staging a series of very successful campaigns.

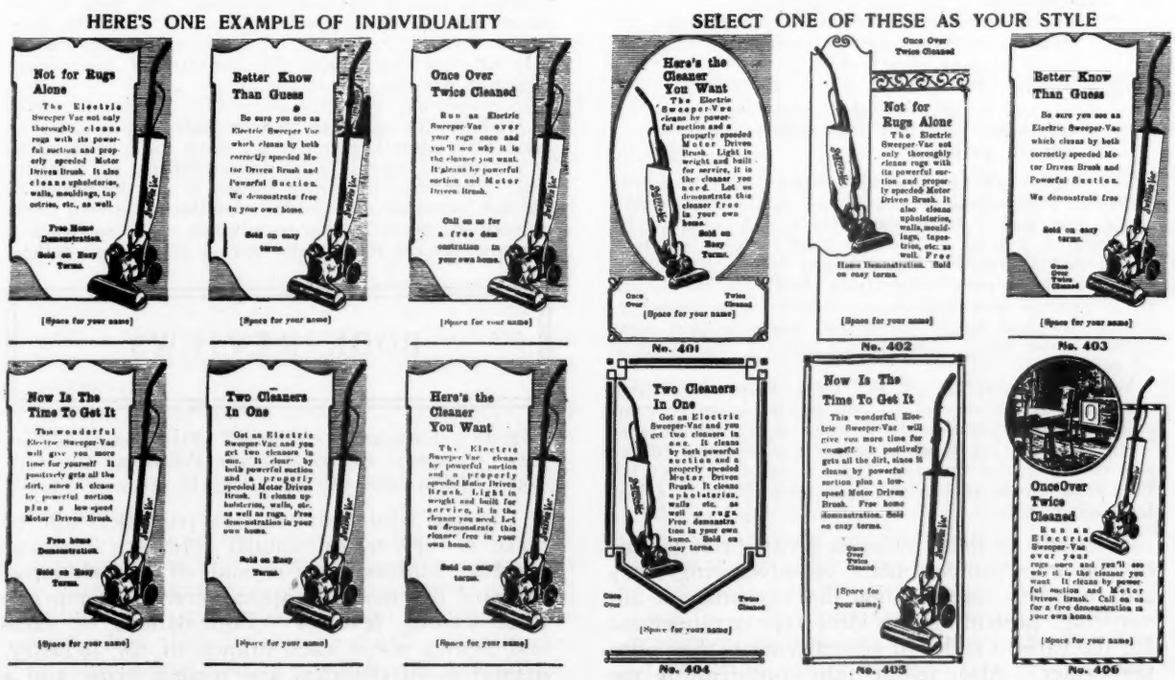
Primary Development of New Business Through Local Advertising.

Ninety sweepers of this company sold in 12 working days was the result of the campaign conducted by The Gainaday Co. of Maine, and this was not exceptional. A number of other campaigns produced like results. The whole success of these campaigns can be attributed to the proper use of the combination of the two great selling forces—advertising and salesmanship.

Confronted with the necessity of forced sales, the electrical merchant, large and small, must use both of these if he is to enjoy a successful appliance business economically obtained. Advertising is the force that develops leads and does the preliminary introductory selling. It breaks through that "on guard" feeling that women have when they know they are being sold. Thus the resistance to the sale is lessened and the salesman is enabled to complete the sale quickly and without great effort. And the smaller dealer, particularly, will find that it is much cheaper to have newspaper advertising break the ice than it is to have the salesman do it.

By newspaper advertising is not necessarily meant full-page, half-page, or even 3-column, 10-in. space. The size of the advertisement is of small relative importance. In fact this must be governed solely by what the dealer can afford to spend. But what is important to the success of any advertising is that the advertisements appear regularly and frequently. A 4-in. advertisement appearing twice a week for 4 wks. will be a great deal more resultful than two 16-in. advertisements a month, and their cost would be just the same.

Most electrical dealers believe in advertising, but only a few are represented in the local newspapers. The reason for this seems to be that heretofore the appliance manufacturer has prepared advertisements and furnished electrotypes



This Is a Series of 4-in. Newspaper Advertisements Prepared to Assist the Smaller Dealer in the Sale of the Manufacturer's Product During Local Campaigns.

that only the larger dealer could afford to use. The 30-in. and larger advertisements so commonly offered by the manufacturers would eat up the monthly appropriation of the average electrical dealer with one insertion. Nowadays, however, with the electrical dealer rapidly becoming an electrical merchant, he is going to administer his advertising appropriation more wisely and he will want more than an occasional insertion.

With the thought of helping its dealers to get the most for their money, the Massachusetts manufacturer is issuing a series of advertising bulletins, each of which outlines a definite and continuing schedule of advertising for a certain size of dealer. A different size of advertisement is shown in each bulletin. For instance, Bulletin "A," the first issued, presents a series of 4-in., single-column advertisements and also tells how small-space advertising could be made exceptionally resultful. This is just the thing for the small dealer ready to start advertising. Later bulletins present larger advertisements and somewhere in the series is a size of advertisement to fit every dealer.

Comprehensive Service Effective When Used by the Dealer.

The primary effort of these bulletins is to educate the dealer to a realization that the greatest force of advertising is gained through the cumulative effect of characteristic advertisements regularly inserted. Perhaps the briefest way of explaining just how the company is presenting this idea to the dealer is to reprint the foreword of Bulletin "A," which is as follows:

To get full value for every cent spent in local newspaper advertising there are three essentials which must be considered:

(1) Continuity.
Advertising to be effective must be definitely planned to appear at scheduled intervals. Insertions must be regular and frequent.

(2) Individuality.
Your advertisement must have a characteristic style all its own, which immediately identifies it as *your* advertisement.

(3) Conviction.
Every advertisement must convincingly present some fact that will cause readers to actually purchase.

The small space (4-in., single-column) advertisements presented in this bulletin embody all of these essentials. Their size makes them inexpensive and, hence, just the thing to run as a series to gain cumulative effect. You'll find a number of styles, one of which you can select to give your advertising individuality. Each advertisement was written to actually sell "Sweeper-Vacs" now and not to create the desire to own some cleaner some time. Therein we embody the essential of conviction.

With the exception of the large space advertising necessary to the success of any special intensive campaign of short duration the smaller dealer will be wise if he confines his local newspaper advertising to the size shown in this bulletin. Read it carefully. We believe it will help you to put your advertising on a better paying basis.

Not only do these bulletins give a brief outline of the sales fundamentals of advertising, they also take into consideration the mechanics of advertising, presenting the ideal type arrangement for the various styles of advertisements they offer the dealer. Also, taking into consideration the fact that the dealer is a busy man and not an advertising man, many additional changes of copy are provided so that a 3-mo. newspaper campaign can be handed to the newspaper at one time, thereby eliminating all future thought and work for the dealer.

Never before in the history of electrical advertising has such a specialized advertising plan been developed. Large or small, the electrical merchant will find somewhere in the series the particular advertising plan that looks most attractive to his purse. And he can use it with confidence that it will pay, for it has been carefully worked out.

To further promote interest and co-operation in putting its effective methods of local newspaper advertising within the reach of the largest possible number of contractor-dealers, this company has sent to its jobbers the following circular letter:

To Our Jobbers:

Most appliance dealers believe in newspaper advertising, but not every dealer believes he can afford it. And, as dealers vary in wealth and in their capacity for potential business, advertising that the larger dealers will look upon with favor has no appeal at all to the dealer whose purse is small.

To help the salesman meet this condition, we are issuing our series of advertising Service Bulletins. The first of these, Bulletin "A," a copy of which you will find appended, presents a definite, complete plan of small space advertising that will instantly have its appeal to the small dealer. It contains all of the essentials necessary to put profit into advertising.

Especially essential to the success of small space copy is that it have a distinctive style. Therefore, the salesman should make a particular effort to have the dealer select one distinctive cut as the basis of a characteristic layout to be used regularly in all of that dealer's advertising.

Later bulletins of this series will present larger advertisements of various sizes. We are developing this idea of a size of advertisement to fit the size of the dealer because we feel that the salesman is close to the dealer, knows local conditions and is in the right position to be the final judge of how much advertising his dealers should be prevailed upon to use.

These bulletins will help him to quicker and better results in putting the message over. He goes to his dealer with a single definite plan. No doubt or confusion enters the dealer's mind, since the salesman is only offering that dealer the one size of advertising campaign best for him to use.

In connection with this advertising service it would be well for the salesman to remember that a series of good, little advertisements is not likely to be as resultful as a series of equally good advertisements of a larger size. Therefore, it is wise always to get the dealer to use the larger advertisements when he can afford them. Advertising pays, but not in advance. The sooner you get your dealers started, the quicker results will follow.

BOOK REVIEWS

"E M F Electrical Year Book." First annual edition, 1921. Chicago: Electrical Trade Publishing Co., Chicago. Cloth, about 1000 pp. (9 by 12 ins.). Price $10.

The first edition of what its publishers aim to make a very useful annual reference book of current information for and of the electrical industry has made its appearance. It comprises three leading features: Compilations of facts and figures about each branch of the industry, definitions of electrical and related terms, and a classification of products made and used by the industry with listings of their producers. This

last feature is the most prominent one of the book as regards number of topics and listings. All topics are entered alphabetically, the entire text being arranged as in an encyclopedia or dictionary so that it is very easy to find any item desired.

In the products and manufacturers' directory feature there are included over 2900 classifications and subclassifications of electrical and related products, each of which is first descriptively defined and followed by the list of its American and Canadian manufacturers. Each leading class of apparatus (such as generators, motors, batteries, switches) is preceded by a general article on principles, types, production, etc. The products include not only all distinctively electrical machinery, instruments, appliances and supplies, but all other equipment needed for power plants, lines, electric railway tracks and cars, electrical manufacturing, contracting or merchandising; in short everything, except service that is produced by or bought by any branch of the electrical industry.

Supplementing this feature are separate alphabetical company listings of over 4900 manufacturers, so that main and branch offices, executive officers and other information about them can be quickly ascertained. A further type of entries in the products class consists of about 4350 trade names which enable one to find readily the name of the manufacturer using each.

The dictionary feature includes, besides the definitions of the products referred to, definitions of several thousand electrical words, terms and abbreviations, also of magnetic, photometric, chemical and other terms closely related to the electrical.

BUILDING A NAME IN CONTRACTOR-DEALER BUSINESS.

Abstracts From Address Presented at Electrical Conference of National Congress of Retail Merchants in Chicago, Aug. 4-5.

By B. F. D. ALLEN,
Allen Electric Co., Lexington, Ky.

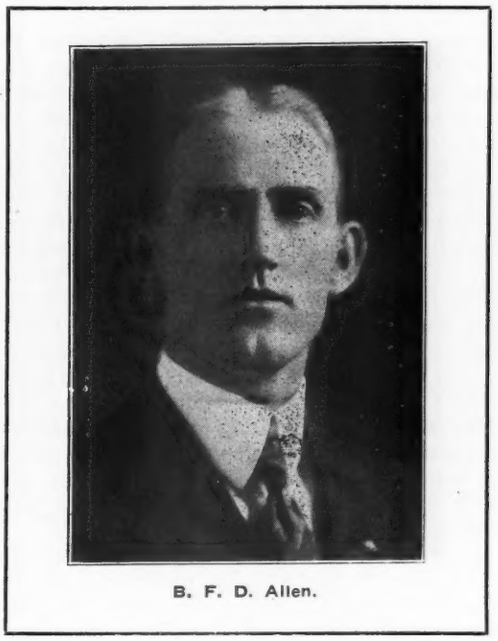
Tons of material are bought and millions of dollars invested in central station equipment which can serve man only by energizing his lamp, motor or heating element. The increase of electrical facilities and the larger sale of appliances does more to remove the drudgery of labor and increase human efficiency than any application of power that has yet been discovered. At last we have a mechanical agency which brightens the home and helps to relieve the drudgery of the housewife.

Every house wired and every appliance sold adds one unit to the fairy story of electrical development. Today the United States enjoys the use of more electrical energy than the balance of the world.

I saw a report the other day of a Middle West appliance store that is doing a business of $25,000 a year in lamps and small accessories, such as bell-ringing transformers, 50-70 switches, pilot light plugs for flatirons, multiple sockets, etc. Another report told of a number of central stations that recently moved their stores to more active business locations, improved their appearance and gave attention to small wares, with the result that the per meter sales of electrical merchandise are almost equal to the per meter sales of electrical energy.

On the other hand, I know an electrical dealer who recently went out of the appliance business because he claimed he could not get a wide enough margin on washing machines and big wares to meet his overhead, yet in his store I could not buy a separable plug. We have all grown so used to large units that we have forgotten how to think about the little items. In his search for a housewife who has $150 cash with which to buy a washing machine, the dealer passes a hundred who need and will buy a dozen separable plugs and pay to have them put on her appliances and portables, so that all will be standard and interchangeable.

Get your name on every installation; advertising pays. But don't be extravagant in your advertising. Be sure that your advertisement is right.



B. F. D. Allen.

You might ask if we in Lexington co-operate. Yes, we do; we are glad to co-operate to the limit. We are willing at any time to give our competitor our service and supply him with anything in our line to help him. I said competitor—we have no competitors. There are several dealers in our city, but we try to make our business so different from the other fellows' that there exists no competition. Our sole aim is service.

CHARACTER ESSENTIAL IN BUILDING SUBSTANTIAL CONTRACTOR-DEALER BUSINESS.

Gentlemen, there is something holding us back today. Isn't it the high cost of leisure? There are a great many people taking their vacation at home; at least they are not working.

There is one thing we must have. That is honesty. The young man who starts out with the resolution to make his character his capital and to pledge his whole manhood for every obligation he enters into, will not be a failure though he wins neither fame nor fortune. No man ever really

does a great thing who loses his character in the process. Honesty—no substitute has ever yet been discovered for honesty. Multitudes of people have gone to the wall trying to find one. Our prisons are full of people who have attempted to substitute something else for it. The consciousness of not being genuine, not being what others think him to be, robs a man of power, honeycombs his character, and destroys self-respect and self-confidence.

Character as capital is very much under-estimated by a great number of young men. They seem to put more emphasis upon smartness, shrewdness, longheadedness, cunning influence, or a pull, than upon downright honesty and integrity of character. Yet, why do scores of concerns pay enormous sums for the use of the name of a man who, perhaps, has been dead for half a century or more? It is because there is power in that name; because there is character in it; because it stands for something; because it represents reliability and square dealing.

Think of what the name of Tiffany, of Park and Tilford or any of the great names which stand in the commercial world as solid and immovable as the rock of Gibraltar, are worth. Does it not seem strange that young men who know these facts should try to build up a business on a foundation of cunning, scheming and trickery, instead of building on the solid rock of *character,* reliability and manhood? Is it not remarkable that so many men should work so hard to establish a business on an unreliable, flimsy foundation, instead of building upon the solid masonry of honest goods, square dealing, and reliability?

A name is worth everything, until it is questioned; but when suspicion clings to it, it is worth nothing. There is nothing in this world that will take the place of character. There is no policy in the world, to say nothing of the right or wrong of it, that compares with honesty and square dealing.

In spite of, or because of, all the crookedness and dishonesty that is being uncovered, of all the scoundrels that are being unmasked, integrity is the biggest word in the business world today. There never was a time in all history when it was so big, and it is growing bigger. There never was a time when character meant so much in business, when it stood for so much everywhere, as it does today.

There was a time when the man who was the shrewdest and sharpest and most cunning in taking advantage of others, got the biggest salary; but today the man at the other end of the bargain is looking up as never before.

Nathan Strass, when asked the secret of the great success of his firm, said it was their treatment of the man at the other end of the bargain. He said they could not afford to make enemies; they could not afford to displease or to take advantage of customers or give them reason to think that they had been unfairly dealt with; that in the long run the man who gave the squarest deal to the man at the other end of the bargain would get ahead fastest.

There are merchants who have made great fortunes, but who do not carry weight among their fellow men because they have dealt all their lives with inferiority; they have lived with shoddy and shams so long that the suggestion has been held in their minds until their whole standard of life has been lowered; their ideals have shrunken; their characters have partaken of the quality of their business.

Contrast these men with the men who stood for half a century or more at the head of solid houses, substantial institutions; men who have always stood for quality in everything, who have surrounded themselves not only with ability, but with men and women of character. We instinctively believe in character. We admire people who stand for something, who are centered in truth and honesty. It is not necessary that they agree with us. We admire them for their strength, the honesty of their opinion, the inflexibility of their principles.

Other Essentials in Building Up a Successful Appliance Business.

One thing that is necessary to a successful business is a well lighted store; there are those who prefer darkness because their deeds are evil. The cost of a well lighted store is about 25% of the salary of one clerk. Our motto is, "We build our business on honesty and square dealing, and our customers are always right."

That intangible and mysterious thing called "Opportunity," about which so many essays have been written, so many sermons preached and so many poems inspired, is not a stranger who comes and knocks at our door in disguise; not a winged meteor that spreads its flaring stream of light across the heavens when least expected, and not an archangel that suddenly awakens us from our sleep to bring good tidings.

Opportunity is just plain home folk. It's as constant as the shadows that walk with us and is always present in our affairs regardless of vocation, position or circumstances. Opportunity is not what may come to us tomorrow, but what we make out of today.

Experience is a book of law that is written and recorded in the life of every individual. Each day a new chapter is added to this great volume. The contents of this book are completely indexed for quick reference and the learning it holds is of much value to its author if the bright light of memory is ever turned upon its pages. What we write today must be intelligently guided by what was written yesterday if the many chapters are to be a story of progress and accomplishment.

Foresight is the steering wheel to guide us aright in our words and actions—the speed throttle and brake lever which enables us to move ahead with dispatch and due safety—it is the mental calculation of cause and effect with respect to the seconds, minutes, hours, days and years through which we are steadily passing.

Contemplating cause and effect sharpens the foresight, and the constant exercise of foresight in our work will eliminate many of the "ifs" that are so easily detected with the hindsight. Foresight is the future tense of good judgment, applied to present actions, which minimizes the regrets in our vision of the past and promotes success in life.

Whenever you see someone up at the top, don't imagine he got there by luck, for back of his glory lies many a story of battle and struggle and pluck. He may seem to be taking things easy today and dodging the trials which irk, but the

years of his past from the first to the last were a constant succession of work.

Whenever you see someone crowned by success, don't fancy he won it by chance. Though he's walking today on an easier way, and you cannot behold with a glance the scars of his battles, just keep this in mind—life's laurels don't go to the shirk, and if you but knew his life history through, you'd know that he once had to work.

Success doesn't come to the indolent hand, with busy men life is concerned; be the man who he may, he will find on the way that his prizes all have to be earned. But whenever you gaze on a leader of men, up on top where the glory is fair, you can know with his luck there were courage and pluck—you can bet that he worked to get there.

ACTIVITIES OF SOCIETY FOR ELECTRICAL DEVELOPMENT.

Substantial Gain in Membership Shown at Meeting of Executive Committee, Particularly in the Contractor-Dealer Division.

At a meeting of the Executive Committee of The Society for Electrical Development, held in the Society's offices in New York recently, presided over by Chairman Charles L. Edgar, president of the Edison Electric Illuminating Co. of Boston, a report covering new membership, reclassification and resignations was submitted showing a considerable number of new applications, resulting in a net income in revenue of an amount well into five figures. Although the actual number of new members was greatest in the contractor-dealer group, a very material increase was noted in both the jobber and manufacturer groups, while from the central station a substantial increase in net income was also noted. The committee was informed of the progress which had been made in securing the return of re-classification cards which had been sent out to all members. While over half of these cards have already been returned, it is important that all cards should be in the hands of the secretary-treasurer at the earliest possible date. Members are urged to see that their cards are returned promptly.

It was stated that the Home Owners Service Institute of New York City had requested the Society to rewrite two booklets as a part of a set of 24 which that organization was preparing to send out accompanied by a set of 50 plans for the use of home builders. These plans were prepared by some of the leading architects of the country as a result of a contest started over a year ago. The booklets requested were entitled, "Managing the Modern Home" and "How to Plan the Wiring and Lighting of the Home." The booklets have been prepared by the Society and it is believed they will have considerable influence in encouraging the small home owner to properly equip his residence with electrical wiring and appliances.

As a result of a visit from A. J. MacDonald, editor of the *Architectural Forum,* arrangements have been completed whereby W. L. Goodwin will serve in a consulting capacity on the staff of that magazine in connection with electrical problems which may be presented. Considering the high standing of the publication, which circulates among the leading architects of the country, it is evident that the Society will be brought into direct contact with this very desirable class. A splendid opportunity will thus be afforded for co-operation in the spread of the electrical idea to the end that the character of electrical installations may be kept abreast of the advances the industry is making.

The committee was interested to learn of the excellent spirit of co-operation which has been brought about between the Society and the trade press, house organ publishers and the like. A new plan has been worked out whereby articles will be released by the Society to the trade papers, such articles also appearing in the current issue of the *Monthly Sales Service.* This plan is just getting under way and already it gives indication of being very cordially received by editors. The Society appreciates the hearty co-operation which it is receiving from the electrical trade press, which is showing a very sincere wish to promote the efforts of the Society for Electrical Development in every possible manner.

The committee's attention was called to a constantly increasing interest in the work and plans of the Society which is evidenced by an ever increasing volume of mail from all sections of the country from both members and non-members. This interest is also evidenced by the fact that many visitors from different interests and industries, both local and foreign, are coming to the Society's offices daily for advice, information and general help.

POPULARITY OF ELECTRIC SERVICE IN OHIO GROWING.

Ohio homes are becoming electrified by leaps and bounds. The use of electric current as a household convenience, time, money and labor saver, is spreading so rapidly in the state that figures showing this growth are amazing. In Ohio's two largest cities—Cleveland and Cincinnati—new electricity consumers are being added at a rate of more than 1500 a month.

Figures compiled by the Ohio Committee on Public Utility Information, showing the number of new consumers added by central station plants in the state during the last few years, particularly the last 6 mo., tend to indicate that electricity has come into its own as a household necessity. So many new householders are clamoring for installation of electrical service that central station managers are confronted with the knottiest problem of a decade—that problem of securing investment of sufficient new capital to finance extensions and betterments of plants and lines so these households may be served. Here is the number of new electricity consumers added in about a score of larger Ohio cities between Jan. 1 and July 1, this year: Cleveland, 9693; Cincinnati, 10,045; Toledo, 2358; Columbus, 2605; Dayton, 2413; Youngstown, 2753; Cambridge, 1060; Akron, 850; Canton, 599; Middletown, 292; Lorain, 799; Steubenville, 676; Warren, 896; Newark, 929; Alliance, 363; East Liverpool, 279; Massillon, 365; Mansfield, 256, and Fremont, 73.

EDITORIAL COMMENT

Effective Window Displays

One of the editors of ELECTRICAL REVIEW, stationed on the Pacific Coast, writes about a matter which we believe is worthy of editorial mention. He says:

"There is a most effective window display to be seen at the electrical appliance store of the Benj. Franklin Electric Corp., in Seattle. A show of appliances in operation always attracts attention and serves to distinguish the particular store in which it appears. A washing machine, a vacuum carpet cleaner and a sewing machine, all in operation in this particular display window, are suggestive of the more practical demonstrations conducted in the main part of the store.

"The display referred to consists of a washer driven by its direct-connected ¼-hp. motor, the latter also driving a wringer through a shaft and gearing. Two strips of carpet, 16 ins. wide, run horizontally as endless belts over pulleys, set about 6 ft. between centers. The shafts carrying the pulleys are driven by small transmission belts from the wringer shaft. A vacuum cleaner, with a 1/10-hp. motor, is mounted directly above the moving belts of carpet in such a position that the cleaning process is brought to bear on the moving carpet. Dust and powdered material are taken up at one end of the carpet belt, to be carried along until they come within the sweep of the vacuum cleaner, whereby the dirt disappears, and there is shown a clean strip of carpet moving on from under the cleaner.

"A sewing machine driven by a motor of about 1/25 hp. as a part of this window display is similar to that which may be seen in many other windows. Conspicuous display cards are placed above these and other appliances, inviting prospective customers to be present at demonstrations, especially of the washing machine.

"The sales methods of this concern are not new, but there is an effectiveness in the manner of carrying them out. Personal letters and telephone calls are resorted to by many in developing trade, success depending upon the originality and tact employed in both. By one means and another the tactful salesman seeks out likely prospects, and such a prospect means a family that needs one or more appliances and has the means with which to purchase. Invitations, either by letter or telephone, are given the housewife to attend demonstrations at the store, and preliminary work is followed by taking a washer or cleaner to the person's home where a trial demonstration may be given; and that is generally the time when the sale is closed, usually on installment plan terms.

"In this store the vacuum cleaner sales take the lead, although the aggregate in cash from washing machine sales constitutes the greater item. The sales of electric flatirons, percolators, toasters, lamps and others of the smaller appliances add materially to the gross volume of business. R. B. Condon, president and manager of the Benj. Franklin Electric Corp., states that he maintains a repair department, and finds it a productive developer of trade. That department is not expected to be a source of profit in itself, but as a means of bringing calls to the store, it is an important factor. A small percentage from the sale of each appliance or article is set aside as a fund for newspaper advertising."

"Let's Go"

In all parts of the country there has been an idea germinating for some time along the lines of making a Herculean effort to get business going again, according to a circular issued by the Society for Electrical Development, the feeling being that people are ready to buy but that the necessary leadership has been lacking.

This idea has now passed from the nebulous state and from all directions we learn that definite action is being taken. The Pennsylvania Manufacturers' Association is the first organization that comes forward with a really definite suggestion (printed in full on p. 3, ELECTRICAL REVIEW of July 16), asking that all join in the movement to force business from its prolonged lethargic stupor. The name given to the movement is "Resumption Week" which, it is proposed, shall cover a period of 6 days, beginning on Labor Day, Sept. 5. The idea is to urge people to resume the practice of shopping at that time and to purchase to their limit. Those who are not prepared to buy for immediate delivery can help by placing advance orders during that week.

It can easily be seen what will result if this movement is standardized throughout the country and the small retailer, wholesaler, manufacturer, public and private institutions, states, cities, towns, neighborhoods, churches, clubs and organizations of all kinds talk resumption and set an example by buying or ordering merchandise of all classes and descriptions during "Resumption Week."

If the average purchaser expends only $100,

such a movement will result in a grand total of from 5 to 10 billions of dollars' worth of business immediately and it would start the country back to business normalcy. This is very ambitious and while it is not expected that everybody will expend $100, still everyone should spend to the limit of their ability, and as some would spend more than $100, the average should work out to something like that figure.

An enormous amount of publicity is being given to this idea of "Resumption Week" and it is hoped that everybody who is interested in getting business back onto its feet will lend all the assistance that lies in their power.

Nation's Financial Position Sound and Strong

While perhaps it would be rash to conclude that all the criticisms leveled at the Federal Reserve Board by men like John Skelton Williams, former comptroller of the currency, and Senator Owen of Oklahoma, have been effectively disposed of by the testimony of W. P. G. Harding, governor of the Board, before the congressional joint commission engaged in investigating the Federal Reserve System, it is tolerably plain that many of the attacks lacked substance and merit or were based on fundamental misconceptions. Mistakes may have been made, but there has been no deliberate discrimination, no "conspiracy."

When the slump in business came, the Reserve Board faced conditions, not theories. Deflation became an imperative necessity. Speculation and hoarding had to be checked. Securities had to be scrutinized. Interest rates had to be raised to discourage excessive borrowing, and in some cases, no doubt, this policy caused hardship and loss. But the United States has remained on a gold basis, the crisis has been weathered, and now, according to Governor Harding, there is reasonable ground for optimism.

Business is improving steadily. The cotton export trade is picking up. Farmers are harvesting crops which they will sell at a profit. Banks are justified in extending credits and carrying loans on a more liberal scale than was possible 6 mo. ago. Men of affairs, Mr. Harding asserts, should quit predicting hard times, plan to do business, and with cheerful faces go to the banks with requests for accommodation.

The good sense of these remarks is refreshing. The United States may look with confidence for the early return of normal industrial activity. The nation's financial system is sound and strong, the gold reserves are ample, and no one with solid collateral or fair prospects need fear being arbitrarily refused credit under any ruling of the Federal Reserve Board.

A Trade-Building Exposition

Congratulations are due the management of the Pageant of Progress exposition which very recently drew to Chicago a vast army of sightseers and seekers after information. The Chicago Association of Commerce should share plentifully in these congratulations, the latter having contributed to an important degree in the success of the great business building event.

One of the important features of the co-operation of the Association of Commerce was the assembling of the National Congress of Retail Merchants, chiefly from the 22 states of the Mississippi Valley, with some of the speakers and prominent visitors from many of the more distant states. Prominent in the Retail Congress was the Electrical Contractor-Dealers' Conference which developed interest and discussed problems of the highest import to the electrical industry.

On the great commercial and recreational pier, where the exhibits were placed, electrical displays and demonstrations predominated and the manufacturers and their representatives without exception shared in the most welcome business revival promoted by the spirit of the event. The beneficial results of this exposition will be far reaching in the electrical industry.

Japan's Youth Seek Electrical Field

Electricity and shipbuilding today are attracting more followers among the youth of Japan than any other forms of employment, according to Saitaro Oi, of the Nippon Electric Co. of Tokyo, who has arrived in this country to investigate American telephone manufacturing methods at the laboratories and shops of the Western Electric Co. in New York City and Chicago. Mr. Oi is a son of Saitaro Oi, the great oriental telephone and telegraph pioneer who introduced the first communication system into Japan a quarter of a century ago and who for many years was chief telephone engineer for the Nippon government. While Japan is going ahead steadily with its extensive shipbuilding program, it is not forgetting its great hydroelectric resources. Its series of lofty mountains with their countless rushing mountain streams present a limitless source of national energy which is rapidly being put to use. The narrow confines of the islands of the Japanese group make it possible to transfer the harnessed power to any corner of the Empire without any great effort. Today, there is scarcely a hamlet which does not boast its electric lighting system.

Mr. Oi says that the Japanese universities are paying particular attention to electrical and me-

chanical engineering. The Imperial University at Tokyo and Kyoto has more students following these courses than any of its other technical branches. Mr. Oi's father was among the first small electrical engineering group graduated from the University 40 yrs. ago. At that time all of the professors were Occidentals. Today the entire engineering faculty is composed of Japanese. The double standard of living which is so noticeable in Japan where the business man dons the dress of the West for his trip to the office and the kimono when he enters his home is reflected in the nation's electrical requirements. The electric light and the telephone have become everyday requisites, but the vacuum sweeper and the electrical dishwasher are practically unknown. The mats which take the place of carpets in Japanese households where the inhabitants invariably remove their shoes before crossing the doorstep and other native furnishings discourage the introduction of many of the labor saving devices which are so common to American and European housewives.

Making Sales With Motion Pictures

There was recently launched in New York City a publicity film service whose business it is to produce interesting and entertaining screen exhibits that contain a real advertising idea and a sales "punch" in every film. The formation of this company and the selection of its line of production was due to an interesting incident.

Some time ago an officer of the company that publishes ELECTRICAL REVIEW met one of the men who formed this new film service while the latter was in the employ of another company engaged in the manufacture and sale of mechanical equipment. During a confidential talk this young man was advised to push ahead a bit and eventually branch out for himself. A few days ago a letter was received from the motion picture man, who, after telling how he had watched and worked for his opportunity, said:

"I found while with the old company that motion pictures were a great selling factor. They made men see things as only they could see them by having the object before them. It's not always convenient to take a man out where he can see the equipment in operation; besides, it may take days to cover the ground desired. Motion pictures make it very convenient for a salesman to take his devices or machinery into a man's office and unfold their operation quietly and more effectively than by word of mouth. He will use a portable projector—they are easily handled—attach it to a convenient outlet, use the wall of the office for a screen and the prospective customer is immediately visiting a number of plants, seeing the machinery in operation, watching manufacturing methods; perhaps he is out of doors watching construction methods—all this without stirring out of his seat in his office. And he sees it as though he was actually there."

Service of this kind is an interesting development of the modern industrial world, made possible only by electricity and to a large extent by convenience outlets for attaching portable devices of any kind directly to a convenient circuit.

Give Us More Outlets

During the past few years there have been published many illustrated articles calling attention to the multifold advantages of electrical appliances in the home. The hold that electrical utensils have taken upon the popular mind indicates that the spirit certainly is willing, but that the opportunities are far too few. In pushing the sale of electrical appliances for domestic use manufacturers, central stations, jobbers and dealers need not devote very much of their effort to reciting the utilities of the apparatus. The strong work should be done in inducing builders of new structures to utilize electric wiring with the same freedom as has been the case in piping for gas. The public at large has very little need of further educations. The price of the electrical apparatus and, in fact, the cost of electric service, would keep very few from making use of current if there were outlets from which to tap the circuit with the same convenience as one now turns on the gas.

A Great Center

Chicago is the logical buying center for electrical supplies of all kinds. It is also a great manufacturing center and leads the world in the production of several types of electrical necessities. Many factories in which electrical supplies are produced are located in the Chicago district, some of them being of great size. Anything that is needed of an electrical or a mechanical nature for installation can be bought in Chicago. Several big stations for the distribution of electrical supplies are located either in or near Chicago. Some extremely large orders from other countries have been filled with articles manufactured here and sold from Chicago.

In this connection it is pointed out that Chicago is evidently destined to become a great center for the distribution of electrical supplies to other countries because of its favorable location, geographically, and the resources of its factories, which are practically unlimited. Chicago has the largest single supply stations for power in the world, as they supply close to 700,000 hp.

THE WEEK'S NEWS

Reports of Important Meetings, Developments and Other Happenings of the Electrical Industry and Its Allied Interests

WILL DISCUSS CONTRACT ROUTINE AT FRENCH LICK MEETING.

An address by Milan R. Bump, of New York City, president of the National Electric Light Association, will be one of the features of the annual convention of the Great Lakes Geographic Division of the National Electric Light Association to be held at French Lick Springs, Ind., Sept. 21-23.

The tentative program also includes an address on "Contract Routine" by R. T. Duncan, Detroit Edison Co.; report by George Neal covering "An Analysis of the Relation of Kilowatts Sold for Residents' Appliances and Lighting"; report by Messrs. Cunningham and Carpenter, Commonwealth Edison Co., on "Electric Vehicles"; address by B. J. Mullaney on "The Illinois Committee on Public Utility Information and Its Future Plans," and 4-min. talks by John F. Gilchrist, Martin J. Insull and J. W. O'Bryan.

RADIO MEN TO MEET IN CHICAGO NEXT WEEK.

High Power CW Transmitters Among Subjects to Be Discussed at Convention of American Radio Relay League.

The first national American Radio Relay League convention and radio show will be held at the Broadway Arena, 5875 Broadway, Chicago, Aug. 30-Sept. 3. Some of the foremost radio technical and scientific men of the country will address the convention, and the speakers will also include prominent government officials interested in radio.

Among the important subjects to be discussed at the opening session are the following: "Radio and the Army" by Major-General Squier; "Radio and the Navy" by Admiral Bullard, and "Radio in Connection with Safety-First Measures" by Coroner Peter M. Hoffman.

The subject of interference control, time revision regulations, traffic regulations, observation of laws, legislative matters, etc., will be discussed at a general business meeting to be held on Wednesday afternoon, Aug. 31. A technical session is scheduled for the evening of the same day, when the following speakers will address the meeting: F. F. Hamilton on "Antenna Design for Amateurs"; Major-General Squier on "Tree Radio"; Admiral Bullard on "Late Developments in Navy Radio Equipment"; S. Kruse on "Practical Points on Spark Transmitter Construction"; M. B. West on "Spark Transmitters and Power-Factor"; J. K. Hewitt on "Station 2 RK"; Paul Godley on "Spark Receiving Apparatus," and E. W. Stone on "Vacuum Tube Construction."

Prof. R. V. Achatz and H. M. Anthony will speak on "The History of Electrical Development" at the morning session Sept. 1, and in the afternoon of the same day there will be a traffic department meeting at which F. H. Schnell and others will discuss the new operating department regulations.

On the evening of Sept. 1 there will be a technical meeting for the discussion of CW transmitting and receiving apparatus. The speakers at this session will be Dr. Lee deForest on "Audion"; Major E. J. Armstrong on "Regenerative Circuits"; Commander A. Hoyt Taylor on "Ground Wire Reception"; Frank Conrad on "Single Circuit vs. Coupled Circuit for CW Reception"; Paul Godley on "An Explanation of the Superiority of CW and Some Methods for Its Reception"; R. F. Gowen on "Practical Points on the Installation of a Typical CW Transmitter"; K. B. Warner on "Effect of Radiophone on Traffic Work," and E. F. W. Alexanderson on "High Power CW Transmitters."

The speakers at the morning session of Sept. 2 are S. Kruse on "Fading Phenomena," and H. M. Anthony on "Sidelights on Radio Development."

At the morning session of Sept. 3 H. M. Anthony will speak on "Laws Governing the Flow of Electricity in Conductors," and J. H. Miller will give an address on "Development of Electrical Measuring Instruments."

In addition to the various technical and business meetings there will be a moonlight trip on the S. S. *Theodore Roosevelt* on Sept. 2 and a banquet and dance at the Drake Hotel on the evening of Sept. 3.

PERSONNEL OF VARIOUS A. I. E. E. COMMITTEES.

President McClellan Appoints Chairmen of Standing and Technical Committees—New Members of Edison Medal Committee Named.

At the first meeting of the Board of Directors of the American Institute of Electrical Engineers for the administrative year beginning Aug. 1, 1921, held in New York City, Aug. 16, President McClellan anounced the committee appointments for the administrative year commencing Aug. 1, 1921.

The chairmen of the committees appointed are as follows: Standing Committees—Board of Examiners, H. H. Norris, New York City; Code of Principles of Professional Conduct, Comfort A. Adams, Cambridge, Mass.; Co-ordination of Institute Activities, W. I. Slichter, New York City; Executive, William McClellan, Philadelphia; Finance, L. F. Morehouse, New York City; Headquarters, W. A. Del Mar, Yonkers, N. Y.; Law, H. H. Barnes, Jr., New York City; Meetings and Papers, E. E. F. Creighton, Schenectady, N. Y.; Membership, E. H. Martindale, Cleve-

land; Publication, A. S. McAllister, New York City; Public Policy, H. W. Buck, New York City; Research, F. B. Jewett, New York City; Safety Codes, H. B. Gear, Chicago; Sections, John B. Fisken, Spokane, Wash., and Student Branches, C. F. Harding, Lafayette, Ind. Technical Committees—Educational, C. E. Magnusson, Seattle; Electrical Machinery, B. A. Behrend, Boston; Electrochemistry and Electrometallurgy, Carl Hering, Philadelphia; Electrophysics, F. W. Peek, Jr., Pittsfield, Mass.; Industrial and Domestic Power, W. C. Yates, Schenectady, N. Y.; Instruments and Measurements, F. V. Magalhaes, New York City; Iron and Steel Industry, E. S. Jefferies, Hamilton, Ont.; Lighting and Illumination, C. E. Clewell, Philadelphia; Marine, Arthur Parker, Camden, N. J.; Mines, Graham Bright, Pittsburgh; Power Stations, H. P. Liversidge, Philadelphia; Protective Devices, H. R. Woodrow, New York City; Telegraphy and Telephony, Donald McNicol, Roselle Park, N. J., and Transmission and Distribution, Edward B. Meyer, Newark, N. J.

In accordance with the by-laws of the Edison Medal Committee, the Board of Directors confirmed the appointment by President McClellan of new members of the Edison Medal Committee, as follows: B. A. Behrend, Boston; John H. Finney, Washington; C. S. Ruffner, Amsterdam, N. Y.—for terms of 5 yrs. each. The Board also elected three of its membership as members of the Edison Medal Committee for terms of 2 yrs. each, namely, A. W. Berresford, Milwaukee; L. F. Morehouse, New York City, and R. B. Williamson, Milwaukee.

I. A. M. E. TO HOLD CONVENTION IN COLORADO SPRINGS.

Ornamental Street Lighting and Mountain Transmission Lines to Be Discussed at Annual Meeting of Municipal Electricians.

The 26th annual convention of the International Association of Municipal Electricians will be held at the Antlers hotel, Colorado Springs, Colo., Sept. 6-9. A summary of the program follows:

Sept. 6, 10 *a. m.*—Address of welcome by Ira Harris, mayor of Colorado Springs, with response by Clark E. Diehl, city electrician of Harrisburg, Pa.; annual address by President R. C. Turner, Atlanta, Ga.; address by William S. Boyd, secretary, Western Association of Electrical Inspectors, Chicago, on "The Relation of the National Electrical Code to the Electrical Industry," and address by L. A. S. Wood, manager of the illuminating section, supply department, George Cutter Works of the Westinghouse Electric & Manufacturing Co., South Bend, Ind., on "Ornamental Street Lighting."

Sept. 6, 2 *p. m.*—Papers by T. P. Sandiford, city electrician, Savannah, Ga., on "Paper Insulation vs. Rubber Insulation for Fire and Police Underground Cables"; James F. Dostal, manager, Colorado Springs Light, Heat & Power Co., on "Mountain Transmission Line Problems," and William G. Dey, superintendent of fire alarm, Louisville, Ky., on "Value of a Modern Fire Alarm System With All Underground Service."

Sept. 7, 10 *a. m.*—Papers by John W. Kelly, Jr., chief of electrical bureau, Camden, N. J., on "Revision of Fire Alarm Installation Rules—From 1920 Report"; B. J. Wheatlake, General Electric Co., Denver, Colo., on "Lightning Protection Problems of Colorado," and an address by Dr. M. G. Lloyd, Bureau of Standards, Washington, D. C.

Sept. 7, 2 *p. m.*—Papers by Charles F. Maulen, Dallas, Tex., on "Suggestions to Municipal Fire and Police Alarm Superintendents"; Claud E. Convers, city electrician, San Antonio, Tex., on "Simplified Pulling of Fire Alarm Box—Continued from 1920 Meeting"; Charles K. Aheard, superintendent of fire and police systems, Waterbury, Conn., on "Wireless Signaling and Its Relation to Fire Alarm and Police Telegraph," and an address by an engineer of one of the large manufacturers of street traffic signals on the subject of "Street Traffic Signals (Electrical)."

Sept. 8, 10 *a. m.*—Paper by E. E. Salisbury, signaling engineer, Boston, on "Signaling Systems as Applied to the Necessity and Convenience of Police Departments"; address by Clarence R. George, city electrician, Houston, Tex.; trouble problems and discussion of same by members.

Sept. 9, 10 *a. m.*—Report of Standardization Committee by R. A. Smith, superintendent of electrical affairs and chairman of the Standardization Committee, Norfolk, Va.; questionnaire—balance of morning session to be devoted to a discussion of municipal electricians' troubles.

Sept. 9, 2 *p. m.*—Report of Exhibit Committee; election of officers; appointment and report of all standing committees, and selection of 1922 convention city.

Sept. 10.—The members will be taken to Denver for an inspection of the Denver fire alarm and police telegraph systems and be entertained by David Reel, city electrician, and Fire Chief John F. Healy, president of the International Association of Fire Engineers.

PROPOSED POWER DEVELOPMENT ON LYRE RIVER IN WASHINGTON.

The Northwest Power & Manufacturing Co., which operates a hydroelectric power plant on the Elwha river, in the vicinity of Port Angeles, Wash., has applied to the Federal Power Commission for a permit to install a plant of 5000-hp. capacity on the Lyre river. This stream leads from Lake Crescent into the straits of Juan de Fuca, and has an average flow of 300 sec.-ft. The fluctuation from this volume is not great, and the proposed power development would not result in reducing the normal water level of the lake. The power site selected on the Lyre is 3 mi. from the lake outlet, the stream having a fall of 400 ft. in that distance. The power plant when constructed will be about 15 mi. from the company's existing power lines, and the proposed new supply of electrical energy could be tied in with its present system at comparatively small expense. The power and lighting load on the company's lines at Port Angeles and other towns is increasing and the plans for installing a new plant are in anticipation of future demands.

The application for the power permit on the Lyre river, and all data pertaining thereto, are being considered by P. H. Dater, district supervisor of the forestry department, as the region of Lake Crescent is within the national forest. The application accompanied by the recommendations of the forestry department will be submitted to the Federal Power Commission for its decision.

ACTIVITIES OF LIGHTING FIXTURE DEALERS' SOCIETY.

A meeting of the Executive Board of the Lighting Fixture Dealers' Society of America was held in Buffalo Aug. 23, at which time matters concerning the Fixture Market and Convention to be held at Milwaukee Jan. 30-Feb. 4, were taken up and future activities of the Society discussed.

The members of the Buffalo Lighting Fixture Dealers' Society enjoyed a visit at Saranac early

this month as guests of Treasurer Sackett. This outing is an annual affair and about a week is spent on the trip.

SOME TYPES OF MOTORS USED IN PAGEANT BOOTHS.

Exhibitors Well Pleased With Result of Publicity Given Their Products at Recent Pageant of Progress in Chicago.

Considerable publicity has been given in previous issues of ELECTRICAL REVIEW to the exhibits at the Pageant of Progress held in Chicago from July 30 to Aug. 14, and the following additional information relative to a few of the various types of motors used in some of the booths for supplying energy will be of interest.

Crocker-Wheeler 1-hp. 3-phase, 220-volt motor was used by the Prepared Roofing Association to force water onto the roof of a building covered with asbestos shingles, to demonstrate that the shingles are waterproof.

Westinghouse 0.5-hp., a-c. motor was employed by the Johnson Service Co. to operate a refrigerator.

General Electric ⅓-hp. 110-volt, a-c. motor, was utilized by the Johnson Service Co. in connection with its thermostatic control display.

Holtzer-Cabot 0.25-hp., 110-volt, a-c. motor was used by the Johnson Service Co. to operate one of the devices exhibited by the company.

Century 0.25-hp., 110-volt, a-c. motor was used by the Wixon Refrigeration Works for driving a refrigerator of 400-lb. capacity.

General Electric 2-hp., 110-volt, 3-phase, a-c. motor was used in the booth of the Gaw-O'Hara Envelope Co.

Kimball 1-hp., 110-volt, a-c. motor was also utilized by the Gaw-O'Hara Envelope Co. in the various processes of printing and folding envelopes.

Adams-Bagnall 0.25-hp., 110-volt, a-c. motor was used by the Wayne Oil Tank & Pump Co. for pumping oil from the filter into the reserve tank, and a similar motor was used to drive a flywheel in this exhibit.

General Electric 1.5-hp., 220-volt, single-phase, repulsion induction motor was used to operate some of the equipment displayed by the Wayne Oil Tank & Pump Co.

General Electric 2-hp., 220-volt repulsion induction motor was used by the International Harvester Co. to drive some of the farm machinery it had on exhibit.

ADDITIONAL DATA ON THE VARIOUS PAGEANT EXHIBITS.

Rindsberger Manufacturing Co., 18 East 24th street, Chicago, displayed various types of electric lamp holders and shades.

Gould Storage Battery Co., New York City, exhibited a line of storage batteries and parts. This company makes storage batteries for every purpose and displayed a submarine cell battery, (one of 120 to be used in U. S. submarines) approximately 4 ft. 8 ins. high by 20 ins. wide. The exhibit also included batteries for farm lighting, mine locomotives, train lighting, electric vehicles, etc.

Hub Electric Co., 2225 Grand Ave., Chicago, exhibited what it claimed to be the smallest incandescent lamp in the world, and the largest glass letter lamp ever constructed out of opal glass. There was also on display a remote control switchboard for tryout switch at the Chicago theater, Lake and State streets, designed and manufactured by the Hub Electric Co. K. G. Rennie, treasurer of the company, on account of his knowledge of the illuminating and electrical business, was made chief adjuster for the Pageant of Progress. The Chicago Electric Sign Co., controlled by the same people, reports thousands of dollars worth of new business as the result of its display, estimates being requested for concerns in cities all over the Middle West. Many other exhibitors also reported a considerable amount of orders booked during the time the exposition was in progress.

Mercury Manufacturing Co., 4118 South Halsted street, Chicago, occupied space V-17 with its line of industrial electric tractors, which differ from trucks in that the tractors are used only to pull and push the load, whereas trucks are usually classed as load carrying vehicles. L. R. Millar was in charge of the Mercury company's exhibit.

NEW YORK SHOW WILL COVER THE USES OF ELECTRICITY.

Practically All Space in Armory Taken—Central Stations and Lighting Companies to Illustrate and Explain Operating Methods.

So great has been the interest on the part of electrical manufacturers and dealers in the coming electrical show in New York City, that practically all the armory space has been disposed of. On Aug. 6, nearly 2 mo. before the scheduled opening, there were only 12 spaces left. Never before in the history of the New York show has the demand for space made itself felt so far in advance of the opening. The show is to be held at the 71st Regiment Armory, Park avenue and 34th street instead of the Grand Central Palace. It will open Sept. 28 and continue 10 days.

This year's show, as those of former years, will cover a great number of the uses of electricity. Appliances for reducing labor in the home will make up a large part of the show. Among these exhibits will be laundry equipment, kitchen appliances, refrigerators, house lighting

The 71st Regiment Armory Where New York Electrical Show Will Be Held.

fixtures, and an apartment completely equipped with wired furniture.

Central station displays will be made by the lighting companies which serve the New York territory. They will not only explain the commercial practices of the companies but will illustrate some of the operating methods. There will be a number of displays by manufacturers of electrotherapeutic apparatus. Some of these will be the large equipment for hospitals and offices and some the smaller devices for use in the sick room at home. Several types of electric signs will be exhibited, and it is probable that an animated display will cover one of the armory walls.

The electric vehicle exhibit will be very comprehensive, and will include displays by the truck manufacturers and the makers of electric storage batteries and garage accessories. Industrial trucks will play an important part in the show for they will be used to move all the exhibits into the armory. A ramp will be built from the street level up to the armory floor, and the industrials will carry their loads up this and make delivery right at the exhibitor's booth. This will eliminate all rehandling of shipments. Among the manufacturers of electric vehicles and vehicle supplies who have already taken space are the Commercial Truck Co., The Lansden Co., the Walker Vehicle Co., the Ward Motor Vehicle Co., the Steinmetz Electric Motor Corp., Walter Motor Truck Co., and the Baker R & L Corp. Storage batteries will be shown by the Electric Storage Battery Co., Edison Storage Battery Co., the K W Storage Battery Co., Inc., and the General Lead Batteries Co.

CIVIL SERVICE EXAMINATION FOR MARINE ENGINEER.

The U. S. Civil Service Commission has announced an open competitive examination for marine engineer (motor). A vacancy in the Coast and Geodetic Survey, for duty at Seattle, Wash., at $140 a month, and vacancies in positions requiring similar qualifications, at this or higher or lower salaries, will be filled from this examination, unless it is found in the interest of the service to fill any vacancy by reinstatement, transfer or promotion. Applications for the above position will close Aug. 30.

The Commission has also announced an open competitive examination for production engineer to fill a vacancy in the hot metal division, Naval Ordnance Plant, South Charleston, W. Va., at $9.76 per diem, applications for which close Aug. 30. Those desiring to take the examinations for the positions mentioned should apply to the Commission at Washington, D. C., for form 1312, stating the title of the examination desired.

INDIANA ASSOCIATION WILL MEET IN INDIANAPOLIS.

The annual convention of the Indiana State Association of Electrical Contractors and Dealers will be held at Indianapolis, Oct. 5-6, with headquarters at the Claypool hotel. Secretary-treasurer A. I. Clifford states that preparations are being made to make this an interesting and instructive meeting, and a large attendance of state members and many well-known men in the electrical industry throughout the country, including manufacturers, jobbers and central station representatives, is expected.

The Executive Committee of the Association is composed of A. E. Harris, Gary, Ind., chairman; Thomas F. Hatfield, Indianapolis; A. L. Swanson, Evansville, Ind., and A. I. Clifford, Indianapolis.

G. E. EXHIBIT AT AMERICAN STEEL TREATER'S EXPOSITION.

The features of the exhibit of the General Electric Co. at the American Steel Treater's Association at Indianapolis, Sept. 20, will consist of two devices of special interest to those interested in electrical methods of treating steel, namely, an oil tempering bath and a new type of semi-cylindrical furnace for treating carbon steel.

The latter is a new development on the part of the company, being a small furnace whose special features are its rapid heating, the low voltage required, the strength of its construction and the accurate control of the temperature. The oil tempering bath is one of standard construction such as has been built by the company for some time.

WIRELESS TELEPHONY DISCUSSED AT PARIS CONFERENCE.

The International Wireless Conference, which has been in session for the past 2 mo. in Paris, France, adjourned this week. It is stated that the conclusions of the conference will be kept secret until they are presented to the various governments by their delegates. However, it is reported that American backing of wireless telephony as the big thing of the near future prevailed at the conference. The principal contention of the American delegation was that certain bands of waves should be reserved for wireless telephony, which was opposed by the Europeans who considered that telephony would occupy too great a part of the usable waves. With the backing of Japan, however, the American viewpoint finally was adopted.

GERMAN MANUFACTURERS BID FOR SOUTH AMERICAN TRADE.

Louis M. Nichols, director of commercial research of the International General Electric Co., has returned on the Munson liner *Aeolus* from Buenos Aires after a study of business conditions in Chile, Argentina and Brazil. Mr. Nichols spent most time in Brazil, where his company has a factory. He reports a number of interesting developments in possibilities for American electrical goods in South America and sheds light on some of the competitive conditions which have to be met.

The German manufacturers of lamps have formed a combine to regain the dominating position they formerly held in South America. They began to ship large stocks, although not having orders for even 20% of the shipments. They started to slash prices and a big Dutch firm in the field was frightened into attempting to fight for a monopoly of the market by making exclu-

sive contracts with its representatives. This Dutch firm promised absolute price protection not only on its own quotations in the future but also against any quotations the Germans would name. The German manufacturers retaliated by publishing very low lists and the Dutch firm has had to meet them not only on new orders, but also with credit memoranda on stocks already held by its agents—a loss of many thousands of dollars a week. The Argentina Government bought large supplies of the German lamps for use in the centenary celebration, but as at least 75% burned out, no more will be purchased from that country.

Small electrical machinery, including motors, transformers and fixtures have been sold by Germans at far lower than American prices. These have come out of local stocks. Some of this machinery is of pre-war manufacture. In the case of heavy equipment German products are still quoted higher than American. Brazil has passed a tariff law amendment (awaiting the president's signature) doubling the duty on imported articles which are also manufactured in Brazil. An important improvement in South American trade through some ports is that development of the Munson line service to the point of certainty and promptness of schedule now makes it safe to promise definite time of delivery with a bonus and forfeiture clause. The substantial cut in sailing time made by the new Munson boats further facilitates trade.

A PROPOSED MERGER OF INDIANA ELECTRIC UTILITIES.

According to reports from Indianapolis articles of incorporation have been filed there for the Indiana Electric Corp., which plans to serve more than 1,000,000 consumers with electricity generated in the Indiana coal fields and transmitted over high-tension transmission lines. It is also stated that a petition has been filed with the Indiana Public Service Commission for permission to consolidate the Merchants Heat & Light Co., the Elkhart Gas & Fuel Co., the Valparaiso Lighting Co., the Wabash Valley Electric Co. of Clinton, the Putnam Electric Co. of Greencastle, and the Cayuga Electric Co. According to the plan the companies named will be taken over by the Indiana Electric Corp.

INDUSTRIAL RELATIONS ASSOCIATION TO MEET.

The annual convention of the Industrial Relations Association of America will be held at the Waldorf-Astoria hotel, New York City, Nov. 1-4. The Association is the outgrowth of the National Association of Employment Managers formed in Rochester in 1918.

The Industrial Relations Association will hold a joint session Nov. 4 with the Academy of Political Science in connection with its discussion of industrial relations. The Association's sessions will be inaugurated by a banquet at the Waldorf on the night of Nov. 1. E. A. Shay, 671 Broad street, Newark, N. J., is the acting executive secretary of the Industrial Relations Association.

COMING CONVENTIONS.

Pacific Coast Division of the Electrical Supply Jobbers' Association. Annual convention, Paradise Inn, Rainier National Park, Wash., Aug. 29-31.

First National Radio Exposition, Broadway Armory, 5875 Broadway, Chicago, Aug. 30-Sept. 3, under auspices of the American Radio Relay League. Show derector, N. E. Wunderlich, 4533 North Sawyer avenue, Chicago.

New England Geographic Division of the National Electric Light Association. Annual convention, New London, Conn., Sept. 6-9. Headquarters, Hotel Griswold. Secretary, Miss O. A. Bursiel, 149 Tremont street, Boston.

International Association of Municipal Electricians. Annual convention, Colorado Springs, Colo., Sept. 6-10. Secretary, Clarence R. George, Houston, Tex.

Pennsylvania Electric Association. Annual convention, Bedford Springs, Pa., Sept. 7-10. Secretary, Henry M. Stine, 211 Locust street, Harrisburg, Pa.

National Exposition of Chemical Industries, Eighth Coast Artillery Armory, New York City, Sept. 12. Secretary, Charles L. Parsons, 1709 G street, N. W., Washington, D. C.

Rocky Mountain Geographic Division of the National Electric Light Association and the Colorado Electric Light, Power and Railway Association. Joint annual convention, Glenwood Springs, Colo., Sept. 19-21. Headquarters, Hotel Colorado. Secretary, Minnie B. W. Baker, 900 Fifteenth street, Denver, Colo.

Association of Iron and Steel Electrical Engineers. Fifteenth annual convention, Chicago, Sept. 19-24. Headquarters, Hotel La Salle. Secretary, John F. Kelly, Empire building, Pittsburgh.

West Virginia-Kentucky Association of Mine, Mechanical and Electrical Engineers. Annual convention, Huntington, W. Va., Sept. 20-22. Secretary, Herbert Smith, 212 Robson-Pritchard building, Huntington, W. Va.

Great Lakes Geographic Division of the National Electric Light Association. Annual convention, French Lick Springs, Ind., Sept. 21-23. Secretary, R. V. Prather, 305 De Witt Smith building, Springfield, Ill.

Indiana State Electric Association. Joint meeting with Great Lakes Geographic Division of the National Electric Light Association, French Lick Springs, Ind., Sept. 21-23.

Illuminating Engineering Society. Annual convention, Rochester, N. Y., Sept. 26-29. Headquarters, Powers hotel. General secretary, Clarence L. Law, 29 West 39th street, New York City.

American Electrochemical Society. Meeting at Lake Placid Club, N. Y., Sept. 29-Oct. 1.

New York Electrical Show, 71st Regiment Armory, Park avenue and 34th street, New York City, Sept. 28-Oct. 8. General manager, George F. Parker, 124 West 42d street, New York City.

Cleveland Section of the American Society of Mechanical Engineers. Great Lakes regional meeting, Cleveland, Oct. 3-4. James Guthrie, Fidelity building, Cleveland.

Indiana State Association of Electrical Contractors and Dealers. Annual convention, Indianapolis, Oct. 5-6. Headquarters, Claypool hotel. Secretary, A. I. Clifford, 507 Odd Fellows building, Indianapolis.

Indianapolis Industrial Exposition, Indiana State Fair Grounds, Oct. 10-15, under auspices of the Indianapolis Chamber of Commerce. Chairman, O. B. Iles, Chamber of Commerce building, Indianapolis.

Southeastern Geographic Division of the National Electric Light Association. Annual convention, Chattanooga, Tenn., Oct. 18-20. Headquarters, Signal Mountain Inn. Secretary, Charles A. Collier, Electric and Gas building, Atlanta, Ga.

National Council of Lighting Fixture Manufacturers. Annual convention and Lighting Fixture Market, Auditorium, Milwaukee, Jan. 30-Feb. 4. Secretary, Charles H. Hofrichter, 231 Gordon Square building, Cleveland.

COMMERCIAL PRACTICE

New Business Methods, Policies, Rates and Kindred Central-Station Matters for the Man Engaged in Selling Electricity

OKLAHOMA UTILITY ADOPTS GROUP INSURANCE PLAN.

Every employe of the Oklahoma Gas & Electric Co. who has been with the organization for more than 6 mo. and less than 1 yr. is now protected by life insurance in the amount of $500. Every employe who has been with the company more than 1 yr. is protected by a $1000 policy. Arrangements with the Equitable Life Assurance Society of New York for the group insurance were perfected through F. C. Gordon, manager of the insurance department, Byllesby Engineering & Management Corp., Chicago, and Neil O. Sullivan of Oklahoma City. The announcement of this broad policy of co-operation on the part of the Oklahoma Gas & Electric Co., made recently by J. F. Owens, occasioned much enthusiasm and deep appreciation. Announcements in the Oklahoma divisions were made by local managers.

In making the announcement Mr. Owens stated that company officials had elected to adopt this plan of insurance after careful study and that no false conceptions of philanthropy or paternalism had actuated them in making the selection. Many employes, because of the hazardous nature of their work, cannot secure individual insurance at any rate. Others could not pass rigid physical examinations required of individuals. Still others, past middle life, found individual rates too high to make this sort of protection available. The policies are payable to beneficiary upon the death of the insured.

FUNDAMENTAL RULES IN SALE OF ELECTRICAL APPLIANCES.

Successful Merchandising Methods in Handling Electrical Goods Pointed Out in Paper Presented Before Iowa Section, N. E. L. A.

By Ira Steele,
Commercial Manager, Des Moines (Ia.) Electric Co.

The use of electricity has become so widespread and has so many advantages from the standpoint of convenience and economy, and the education of the public has progressed so far in the use of electricity that there is a ready market for electrical goods; therefore, a profitable field. Wherever there is a public demand or need there will be found some one to engage in the business of supplying the demand or meeting the need, hence, enjoying the profits which result from the sale. No one is in better position or has such an advantage on account of familiarity with the use of electricity than the central station, and without doubt there is a splendid opportunity and great possibilities to make the central station a logical channel through which the sale of electrical goods should be directed.

Proper merchandising methods in any line of business require certain fundamental principles and correct business practices to assure the success of the business. A few of these fundamentals are purchasing, advertising and display, selling personnel and service to the consumer.

In considering the store if the location is in the center of traffic it is of course desirable. Central stations, however, as a rule, have their locations and this should be made the most of, whether they are in the center of traffic or not. The correct arrangement of the store inside is very important, and at the present time most of the manufacturers maintain a department operated by the highest class of men that are ready and willing to design the entire inside arrangement of a retailer's store. As I understand it, all that is necessary is to send the dimensions of the store to these departments and they will lay out the whole thing.

The question of purchasing is very vital. The operation of a merchandising department in most department stores allows the head of the department to make purchases which in their opinion will meet with a ready sale. Inasmuch as there are no better merchandisers than the department stores, I assume that it would be ideal to allow the head of the merchandising department to select the various lines of appliances. This, however, should be well regulated and while purchases should be made if possible in such quantities as to allow a maximum discount, at the same time any possibility of buying such quantities that will not allow quick turnover on stock should be eliminated. The selection of appliances for resale no doubt varies in various communities, but it would seem that the best policy would be to buy merchandise of standard makes from recognized manufacturers, that you can sell with a reasonable profit and feel assured that the ultimate consumer is going to obtain full value. The policy of co-operation maintained by the manufacturer in advertising, sales help and replacements should be taken into consideration and considered of equal importance along with the quality of appliances which they sell.

Advertising can be accomplished through several mediums, such as newspapers, direct mail letters, billboards, signs, and so forth. There is absolutely no question but what if handled in the proper manner that it will accomplish results which can be made to pay.

Copy for newspaper advertising should be written by someone who knows the class of people that buy electrical appliances and who has absolute knowledge of the work to be performed by the appliance. This copy should carry no misstatement yet create attention, interest, desire and carry more or less of the human interest or appeal to buying motives. Whenever possible, newspaper advertising should tie in with the national advertising of the manufacturer, as there is perhaps no class of advertising so universally read as that in the various national magazines. On

the larger appliances that are sold in deferred payments, with a small payment down it should be so stated in the advertisement. Comparative prices in advertising do not seem to obtain the results for the reason that as a general rule they do not tell the truth.

Letters both to create prospects and follow-up prospects are very valuable in merchandising. Letters of this kind should be brief and to the point, otherwise they will not be read. Too many inclosures are bad, and if the letters are written with immediate sales in mind care should be used that the customer's reply or telephone call can be made to the store with the minimum effort.

Good Window Displays of Appliances Attract Buyers.

Sign and billboard advertising seem to have become very popular with the larger merchandisers and I believe it is usually confined to some certain two or three appliances, such as sweepers, washing machines and dish washers, with the idea in mind to connect these particular appliances with their particular store.

The value of good window display cannot be overestimated. In the last 2 or 3 yrs. the manufacturers have given quite a good deal of time and attention in an effort to help the retailer improve his window displays. It is much better to arrange neatly some two or three appliances in the window than it is to try to put one of each of a dozen different types of appliances. Window displays should tie in wherever possible with the national advertising and any local events or happenings that are of interest to the community. Appliances should carry small window cards, so worded that they would appear to the purchaser as "Reasons Why Cards."

There should be a definite policy in the merchandising department, covering all sales, that is, just what appliances will be sold on deferred payments and just what appliances will be demonstrated free in the home; just what price schedules are to be followed, what difference in prices in deferred payment and cash.

Where there are salesmen working outside of the store it should be decided whether they are to be specialty men and sell one certain kind of an appliance, or whether they are to be given a defined territory or a certain number of customers and sell all classes of appliances. Both the specialty selling and the general selling in districts or territories are in successful operation. It has been our experience, however, in the case of larger appliances that are to be demonstrated in the homes, or when it is desired to introduce a new type of appliance, that it is the best plan for salesmen to sell nothing but this appliance, as by so doing it is possible to obtain more intense selling. In the case of the central stations where there are not enough customers to keep a salesman busy all the time on appliances, it has been found that an employe working part time on sales can obtain very good results.

In the selection of salesmen care must be exercised to obtain people that are courteous, of good personality and capable of being order makers and not just order takers. They must be honest, fair and have your best interest at heart. But they cannot lose sight of the fact that they are the store's personal contact and representatives with the public, and the treatment they accord the public will at all times be reflected back on the store. It is, therefore, essential that this treatment is absolutely the best. The salesman must know the price of appliances, the various selling points and the results to be accomplished by the use of the appliance. The salesman's compensation should be based either on a straight commission or a salary and commission and their earning capacity should in no way be restricted, provided that they are able to produce the business. It is the opinion of the Commercial National Section, Compensation of Salesmen's Committee, that a commission in addition to a salary should be paid all salesmen. I am of the opinion that such commission should vary, depending upon the locality, and should be handled strictly as a local proposition.

There are very few electrical appliances on the market today that do not at some time or other need service. I know of no way to make friends with the consumer quicker or better than to give prompt and efficient service in repairing appliances, and in many cases where the appliance is not satisfactory to the consumer, even though they may have used them for some time, they should be replaced. A great deal of service may be eliminated if the proper instructions are given the consumer at the time of the sale, and a great many more sales will be made to friends of the user if proper service is rendered at a time when something is wrong with the appliance. Our service department is the greatest asset we have over the department store, furniture store or so-called specialty house that attempts to sell electrical appliances, as the public will very soon realize that this class of merchandise must be purchased from people who are familiar with its operation, who carry repairs and are in a position to give prompt service.

In addition to making a profit on the sales of appliances and increasing the use of electricity, there is in my opinion no better method of creating friends and good-will and getting people to really boost for the central station than in the correct selling and servicing of appliances that are designed to use electricity.

NEW JERSEY UTILITY OFFERS ITS STOCK TO CONSUMERS.

During the 10 wks. that the Public Service Corp., Public Service Terminal, Newark, N. J., has been offering cumulative preferred stock, bearing 8% interest, to consumers, a total of 20,000 shares has been disposed of to a total of 7474 subscribers. The stock was offered on a "customer-ownership" plan, being sold at par with a limit of 10 shares to a customer under an installment plan of payment. The success of the subscription has prompted the corporation to continue the plan, but on a less intensive basis.

Sulphur in bituminous coal occurs mainly in the form of iron pyrites, which, when burned with the coal in the fuel bed, forms iron oxide, a material which by itself would not produce clinkers. If, however, this iron oxide is exposed to high temperatures in the presence of silica and silicates usually also available in the ash, clinker in the form of fusible silicates may be produced.

LATEST APPROVED APPLIANCES

Approved by Underwriters' Laborators, Following Examination and Tests Conducted Under the Standards of the National Electrical Code

Fixtures, Gas-Filled Lamp Type.—H. S. Whiting Co., 104 East 41st street, New York City. Listed Oct. 19, 1920.

"Economy" semi-indirect fixture for use with gas-filled lamps.

Ground Clamps.—Chelten Electric Co., 4859 Stenton avenue, Philadelphia. Listed Nov. 30, 1920.

"Chelten" ground clamps for use with 3-in. rigid conduit or less.

Panelboards.—Electric Motor & Engineering Co., 2nd street S. W. and B. & O. R. R., Canton, O. Listed Oct. 9, 1920.

Consisting of an assembly of busbars with or without standard cutout box, or with or without standard switches mounted on insulating bases. Designed for use on low-potential circuits.

Panelboards.—Mendell Manufacturing Co., Mattapoisett, Mass. Listed Nov. 10, 1920.

Consisting of an assembly of busbars, with or without standard cutout parts, or with or without standard switches mounted on insulating bases; designed for use on low-potential circuits.

Sockets, Medium Base.—H. T. Paiste Co., 32nd and Arch streets, Philadelphia. Listed Nov. 5, 1920.

"Paiste" metal shell medium-base sockets; key, catalog Nos. 9387, A-50, AM-50, E-50, F-50, G-50, J-50, JM-50, K-50, L-50, LF-50, LM-50, M-50 and MS-50; keyless, catalog Nos. 9388, A-51, AM-51, E-51, F-51, G-51, J-51, JM-51, K-51, L-51, LF-51, LM-51, M-51 and MS-51; pull, catalog Nos. A-52, AM-52, E-52, F-52, G-52, J-52, JM-52, K-52, L-52, LF-52, LM-52, M-52 and MS-52; all above types with shade-holders attached.

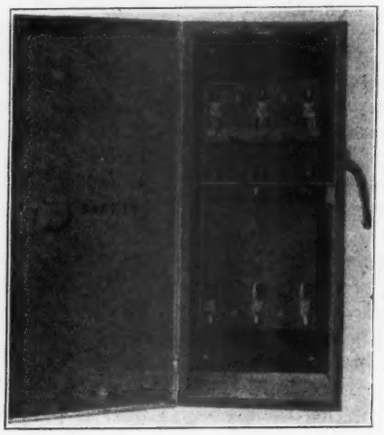
Outlet Plates.—General Machine & Manufacturing Co., 544 Iranistan avenue, Bridgeport, Conn. Listed Nov. 5, 1920.

"G. M. & M. Co." Outlet Plate.

Steel outlet plates with fixture and clamps for flexible-steel conduit.

Switches, Inclosed.—Safety Electric Products Co., 1548 Central avenue, Los Angeles, Cal. Listed Oct. 15, 1920.

Standard fused switches, mounted in sheet-metal cutout boxes or cabinets of standard construction and



"Safety" Inclosed Switch No. 10053.

provided with external handles for manual operation without opening cases; 250 volts d-c., 500 volts a-c. or less, 100 amperes or less; catalog Nos. 300, 400, 500, 3053, 6053 and 10053.

Switch Boxes.—United Electrical Manufacturing Co., Adrian, Mich. Listed Nov. 2, 1920.

"Trojan" sheet-steel, single and gang-type boxes for mounting switches and attachment-plug receptacles; catalog No. F.S.1001; flexible tubing pattern.

Switches, Fixture.—Cutler-Hammer Manufacturing Co., Milwaukee. Listed Oct. 13, 1920.

"C-H" Canopy switches provided with rubber-covered fixture wire permanently secured to switch terminals; 3 amperes, 125 volts; 1 ampere, 250 volts; catalog Nos. 7141-42, 7151-55, 7157-58.

Switches, Knife.—Barber Electric Manufacturing Co., North Attleboro, Mass. Listed Oct. 29, 1920.

"Barber" knife switches; 30 amperes, 125 volts; catalog Nos. 701 and 703; all standard ratings, Types A and C.

Switches, Knife.—Connecticut Electric Manufacturing Co., Bridgeport, Conn. Listed Oct. 19, 1920.

"C. E. M. Co." knife switches; 0-600 amperes, 250 volts, Type A.

Switches, Inclosed.—Johns-Pratt Co., Hartford, Conn. Listed Nov. 2, 1920.

"Cabinet Support Branch Block," consisting of a double-pole, porcelain plug-fuse cutout base and hinged porcelain cover, designed for mounting in side of sheet-metal entrance cabinet so that connections can be made within cabinet and fuses can be replaced without opening cabinet; 0-30 amperes, 125 volts.

Switches, Inclosed.—Brown & Pengilly, 607 East 4th street, Los Angeles, Cal. Listed Dec. 3, 1920.

Standard fused switch mounted in standard sheet-metal cutout box or cabinet and provided with external handle for manual operation without opening case; 250 volts, d-c., 60 amperes.

Switches, Inclosed.—Trumbull Electric Manufacturing Co., Plainville, Conn. Listed Oct. 15, 1920.

"Circle T." inclosed switches, 30, 60, 100 and 200 amperes, 250 volts; 30 and 60 amperes, 500 volts, a-c.; 30 and 60 amperes, 600 volts; catalog Nos. 13899-901, 13901½, 13910-11, 13911½, 13912-13, 13913½, 13913¾, 13914-15, 13915½, 13916-17, 13917½, 13917¾ and 13918-19.

Switches, Oil-Break.—Westinghouse Electric & Manufacturing Co., East Pittsburgh, Pa. Listed Nov. 19, 1920.

Non-automatic, oil-immersed, drum-contact switches designed for control of motors driving textile machinery; "Westinghouse," 10 hp. or less, 550 volts, a-c., or less, 2 and 3-phase; types T-1 and T-2.

Wires, Heater Cords.—Collyer Insulated Wire Co., Pawtucket, R. I. Listed Nov. 30, 1920.

Heater cords; marking: Two black threads cabled with copper strand and a blue thread running parallel with conductor between insulation and braid.

Transformers, Bell-Ringing.—Betts & Betts Corp., 511 West 42nd street, New York City. Listed Oct. 22, 1920.

Air-cooled transformers designed to

"Vim" Type Transformer.

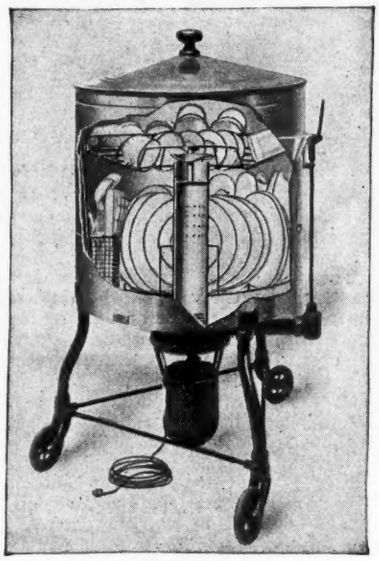
supply current at following voltages; for use only in ringing bells or for similar signaling work, when primary wiring is installed in accordance with Class C rules, National Electrical Code; 60 cycles, primary 110 volts; secondary 9 volts; "Vim."

APPLIANCES and DEVELOPMENTS

New, Improved or Interesting Electrical and Mechanical Apparatus and Devices, and Applications of Equipment and Methods in Practice

A New Dishwasher Made in Two Styles.

One of the latest appliances to be placed on the household market is the "Quaker" dishwasher, distributed through the Quaker Dishwasher Sales Co., 240 Cherry street, Philadelphia. This dishwasher is made in two styles, one a portable machine on wheels is



"Quaker" Portable Dishwasher.

shown in the illustration, the other a combination porcelain top kitchen table with the washer on a shelf below, thus combining two articles. As the table top is hinged, it facilitates the inserting of dishes.

The tank used is 20 ins. deep and 20 ins. diam., making a large receptacle for holding the dishes. Using 8 quarts of hot suds and operating the machine 3 min. will wash the dishes thoroughly, according to the claim of the manufacturer. Other points in construction are the noiseless gears, lack of vibration, and absence of complication. An unusually small motor is required, the one used being a Westinghouse type "ADS" Universal motor, which will operate on any circuit from direct current to 60-cycle alternating current at its rated voltage.

Another feature in connection with this appliance is that this small motor keeps the operating expense of the "Quaker" dishwasher very low, according to the manufacturer's statement.

Distinctive Features of "Gainaday" Suction Cleaner.

The Pittsburgh Gage & Supply Co., 30th street and Liberty avenue, Pittsburgh, has added another member to its growing family of household appliances in the new "Gainaday" suction cleaner. This new cleaner has many distinctive features, which are thus enumerated by the manufacturer:

The bag is on the right hand side, instead of on the left, where it is in the road and where it rubs against the operator's clothes. A spring attached to the bag and to the handle tends to draw the handle forward, thus holding it upright when released by the hand. The forward wheels are drawn in close to the body of the machine, and if it should accidentally fall and strike on the hard rubber wheels, there would not be enough leverage on the axle to cause it to bend. Then, too, the handle is tipped with a soft rubber cushion which prevents marring the floor if the handle is accidentally let fall. The fan chamber and the nozzle are one unit and cannot be strained or bent if roughly handled.

A merchandizing feature of considerable value has been given this cleaner. Instead of the usual oval dust bag, the "Gainaday" has a triangular bag with the "Gainaday" trademark painted on it. It is stated that this unique shape enables the dealer to capitalize on the well-known trademark which is triangular in shape.

"Gainaday" Suction Cleaner.

Vacuum Cleaner With Wide Range of Applications.

A new vacuum cleaner that weighs only 6 lbs. and is designed primarily for cleaning store shelves, automobile upholstery, billiard tables, clothing store stocks, barber shops, small apartments, and other work of the kind, but which is essentially practical and efficient for

"Premier Handy" Vacuum Cleaner.

the multitudinous other tasks set to the vacuum cleaner, has been placed on the market by the Electric Vacuum Cleaner Co., Inc. It is called the "Premier Handy." Weighing no more than an electric flatiron, and equipped with a strap for supporting it from the shoulder, it is easily carried from place to place, a 20-ft. lead of flexible cord giving it a wide operating radius from the receptacle to which it is attached.

It is driven by an air-cooled General Electric motor, thoroughly tested and guaranteed. The motor housing is of purest grade virgin aluminum, expertly fabricated. The handle by which it is carried is of black fiber and is securely fastened to the motor housing. The twill bag is connected to the cleaner outlet by a sleeve bag connection with bayonet lock, and the bag is clamped on by a slide-on clamp, easily removed for cleaning.

The "Premier Handy" is made as accurately and as carefully as the skilled workmen of a great factory can make it, and is sold under a rigid written guarantee. Every motor used in this machine is given a 4-hr. running test with 25% overload of current. Should any motor prove in any way defective, it is rejected.

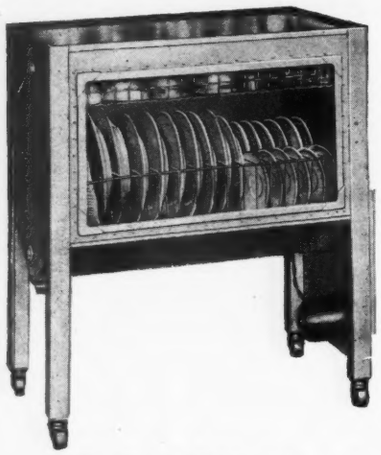
The attachments consist of a 25-ft. hose sufficiently flexible to permit the free use of the attachments, but not so flexible as to make careful guiding impossible; a carefully constructed, scientifically designed tufted

bristle brush tool for cleaning articles of clothing and all materials of fabric construction; a blower coupling which, when the bag is removed, is attached to the outlet of the cleaner and to the hose, converting the machine into blower for blowing the dirt and dust out of screens or corners or other inaccessible places; and a strap, fitted with buckles, by which the cleaner may be supported from the shoulder. The versatility of the machine is shown by the fact that the blower arrangement may be used as a substitute for an electric fan. By connecting the cleaner with a floor tool by means of a fiber tube and a flexible rubber joint, rags and carpets may be thoroughly cleaned, thus making this type especially adapted to the needs of small apartments.

The range of applications of this cleaner is very wide. In addition to the uses outlined, it can be used between runs for cleaning street cars, railroad coaches, Pullman cars, taxicabs, for cleaning theater seats, cleaning the switchboards in telephone offices and for innumerable other purposes of the kind.

Dishwasher With Many Desirable Features.

None of the household tasks occurs more frequently or is more distasteful to servants or the housewife than that



The Shank Dishwasher.

of dishwashing. Three times a day, or 1095 times during the year the dishes must be washed. A machine which will absorb the drudgery of this task should be welcomed in every home.

The Shank dishwasher embodies many desirable features. It has a capacity somewhat greater than is demanded by the average family yet its rectangular shape requires little space in the kitchen. A minimum amount of hot water is used, which is a most important factor when there is no dependable hot water service. The power required is about the same as the average incandescent lamp, yet the water agitator is so effective that the dishes are successfully and satisfactorily washed in from 3 to 4 min.

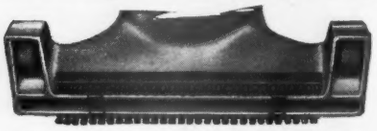
It is simple and easy to operate. Just place the dishes, glass and silverware in the racks; add washing powder and 3 quarts of boiling water, turn on the motor and run about 3 min., then draw off the water. Next add hot rinse water; turn on the motor again for a minute; then draw off the water, and the work is done in a quick and sanitary manner. The dishes dry from their own heat. They may be left in the machine until the next meal or removed to the pantry, as desired. Only 3 quarts of water are required for each operation—just a teakettle full. The reasonable amount of water used is a saving in the home that does not have a quantity of hot water always on tap. Then, too, the machine is neat and compact. It can be placed beneath table or drainboard, thus occupying a minimum amount of space.

The machine is all that the best materials and skilled workmanship can make it. Its simplicity, sturdy construction and fine appearance are among the main features of the appliance. Its ability to thoroughly and quickly clean and sterilize all sorts of dishes, pots and pans, commends it to the housewife. The machine is manufactured by the Cyrus Shank Co., 625 West Jackson boulevard, Chicago.

"Cadillac" Model No. 90 Electric Vacuum Cleaner.

In an illustrated 4-page folder the Clements Manufacturing Co., 609 Fulton street, Chicago, describes the features of the "Cadillac" model No. 90 electric vacuum cleaner. It is stated that this appliance has a narrow nozzle 12 ins. long and 5/8 in. wide, thus giving it a strong suction and enabling it to get all of the deeply embedded dust and dirt. It is supplied with a quick-detachable bristle floor brush which fits over the nozzle, one row of tufted bristles directly in front, the other directly back of the nozzle opening. When it is necessary to remove lint, hair, thread, etc., which has become entangled in the nap, this brush does the work nicely without interfering with the operation or the efficiency of the vacuum cleaner. It also straightens up the nap and makes floor coverings like new.

The "Cadillac" model No. 90 is equipped with a 1/5-hp. motor operating an 8-blade aluminum fan. All castings are of highly polished aluminum and the machine is completely finished in every detail. Extra attachments can be used with this machine to clean everything in the home, thus making the "Cadillac" a complete power plant. The accompanying illustration is a bottom view showing the detachable floor brush

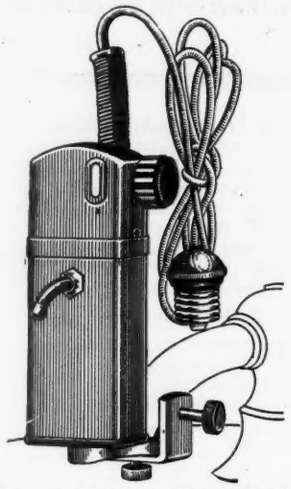


Bottom View of "Cadillac" Electric Vacuum Cleaner.

in position. It is stated that the "Cadillac" No. 90 can be used with or without this brush.

Portable Type of Electric Water Heater.

An electric instantaneous water heater of a portable type has been placed on the market by the Majestic Electric Development Co., 656 Howard street, San Francisco. The main features of this appliance are thus enumerated by the manufacturer: It delivers hot water instantly at any hour of the day or night, where hot water is desired in limited quantities, and it can be attached (without the aid of tools) to any ordinary water faucet. The electrical connection is made by screwing the plug into a suitable 110-120 volt outlet. The temperature of the water is controlled by the force of the flow of water from the



"Majestic" Electric Water Heater.

faucet—the greater the flow the cooler the water—the lighter the flow the hotter the water.

The "Majestic" water heater is instantaneous in operation, heating only the water that flows through it, hence there is no waste or needless expense. Its cost of operation is stated to be but the fraction of a cent per use. Cold water may be obtained from the faucet to which the "Majestic" is attached without removing the heater. Every "Majestic" electric instantaneous water heater is provided with an automatic switch, which may be operated on or off as hot or cold water is desired, but should the switch be left on while the water is not flowing it automatically shuts off the current. The "Majestic" heater is small and light enough to be carried in the traveling bag or pocket, the dimensions being 5 ins. high, 2 ins. wide and 1 in. deep.

Two Types of "Excelsior" Electric Toaster.

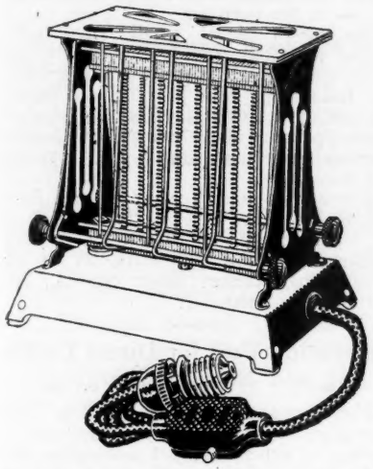
Whether the preference is for an electric toaster of the upright type or the horizontal range style, the "Excelsior" electric toaster made by the Perfection Electric Products Co., New Washington, O., and distributed by George Borgfeldt & Co., 16th street and Irving place, New York City, will satisfy, since it is procurable in both styles and two sizes of the range or stove type.

The upright model is true to type in

Model "A" Toaster Range.

general appearance, gives a uniform distribution of heat and its capacious rack will hold a large slice of bread handily. It also has a broad top upon which food may be kept warm and is equipped with a push-button switch for the ready control of the current. The simplicity of the design and construction prevents the accumulation of crumbs and enables the device to be easily cleaned.

The two range or grill models are designed for use in the home, office, shop



"Excelsior" Electric Toaster, Upright Type.

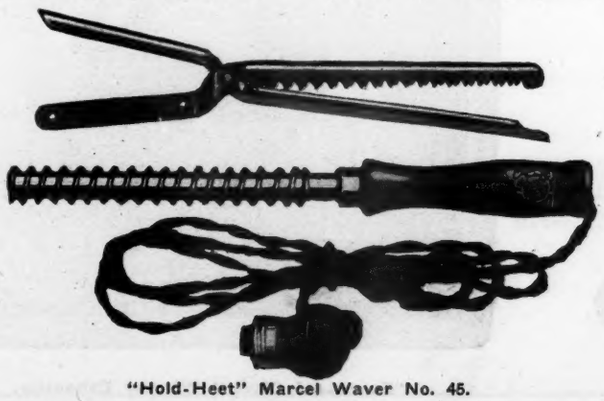
or when traveling, and among the special features is a polished reflector which in combination with the unique arrangement of the heating element gives a uniform distribution of the heat and at the same time serves as a false bottom, since there is an air space between it and the final bottom plate of the appliance that retards the conduction of heat downward to the surface upon which the toaster is resting. The model "A" is 3 ins. high, 8 ins. long and 5 ins. wide and is equipped with a 70/50 Cutler-Hammer switch for turning on and off the current. The junior model measures 2.5 ins. high, 7 ins. long and 5 ins. wide, but has no current control switch.

Features of New Electric Marcel Waver.

With all the girls wearing their hair in marcel waves a new electric marcel waver is an item of very great interest. In the past it has been impossible to get a satisfactory marcel wave without the services of a professional hair dresser. With this new device any inexperienced person, with very little practice, can put in the real flat French marcel waves that are so much in vogue today.

The article is furnished as a two-piece appliance, with the heat confined to the corrugated rod. The clamping tongs are not heated. They are slipped into the hair wherever the wave is desired, and not being hot it is possible to arrange the hair in the tongs so as to absolutely insure getting a wave exactly where it is desired without any possibility of burning the user. The corrugated heated rod is then placed flat and firmly into the corrugated groove in the tongs and slowly pulled about 1 in. This pulls the wave into the hair and the rod is held in position for a short time until the wave is heated into place. In the next operation the tongs are slipped along in the hair, where the next wave is desired, and the heated rod is pushed instead of pulled, thus putting the wave in the opposite direction.

A great many people are marceling their own hair with this device with entirely satisfactory results, but it is of course much easier for a second person, even though inexperienced, to put in the waves. This, however, is no objection, as in the past no one but a professional could marcel hair, and it is impossible for even professionals to marcel their own hair by the methods used in the past. This device is manufactured by the Russell Electric Co., 140 West Austin avenue, Chicago, manufacturer of electrical appliances.



"Hold-Heet" Marcel Waver No. 45.

A New "Sepco" Model Automatic Water Heater.

An automatic water heater of the circulating type, for attachment to any standard range boiler and provided with a patented gravity seal against radiation, so necessary to prevent the loss of heat and consequent loss of electricity, has been placed on the market by the Automatic Electric Heater Co., of Warren, Pa.

The heater is made in one size, 8 ins. diam. by 14 ins. high, but may be equipped with either two or three of the 1000-watt "Sepco" heating elements, giving ample range of capacity for all normal home needs. Double radiating walls are employed in the design of "Sepco" elements, with port holes near the base of the unit, which permit the water to not only be heated by contact with the outer surface, but draws it also through the hollow center of the unit. Thus a continuous circulation of water takes place both inside and outside the unit and all of the heat is absorbed by the water as rapidly as it is generated. The heating units are independently wired so that one may be removed without interfering with the wiring connections or automatic control of the others.

Regulation of the operating temperature at will is provided by adjustment screws, while a control bulb filled with a volatile substance which expands with the heat and contracts with the cold, exerts a pressure which automatically operates the electric switch. A pilot light, claimed by the manufacturer to be superior to similar signal devices, indicates when the appliance is functioning. It consists of fuses of high-resistance wire which glow brightly when the current is on, serving as a signal light and also protecting the heating elements against undue rise in voltage.

Two circulating valves permit the flow of water through the boiler to be regulated, and it is stated that all underwriters' safety regulations are complied with strictly by the use of unit and wire-housing castings. Illustrated data on this new "Sepco" model have been issued and are offered free by the manufacturer, the Automatic Electric Heater Co.

An Electric Utility Device for Family Use.

The Reynolds Electric Co., 2650 West Congress street, Chicago, recently issued a circular describing the "Reco" electric kitchen unit, which is made primarily

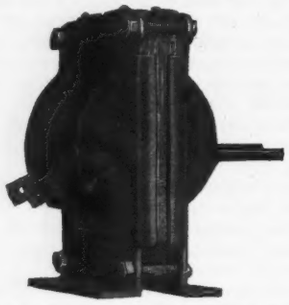
"Reco" Electric Kitchen Power Unit.

for family use. The manufacturer states that it will do 95% of the kitchen work, such as mixing, beating, stirring and whipping and, in addition, drive the food chopper and ice-cream freezer. There is also an attachment for grinding and sharpening cutlery, polishing silverware, etc. The unit is very convenient to operate and easy to understand.

All of the connections are of the bayonet type so that changes in utensils or paddles can be made readily. This device occupies about the same space as the average hot water radiator in the kitchen. It is equipped with a 1/6-hp. motor and is furnished with 10 ft. of cord and attachment plug. The unit can be supplied with or without stand or extras, as desired. When the stand is not supplied the device may be secured to the end of the kitchen table.

Westinghouse Type "K" Indoor Current Transformer.

Accuracy is the feature of the type "K" current transformers just brought out by the Westinghouse Electric & Manufacturing Co., East Pittsburgh, Pa. This type is listed for ammeter, wattmeter or watthour meter use, but may also be used for operating relays and circuit-breaker trip-coils, where the



Accurate Current Transformers for Instruments and Relays.

load at 4 amperes does not exceed 25 volt-amperes at 25 cycle, or 65 volt-amperes at 60 cycle.

As shown in the illustration, the transformers are arranged with the primary leads on opposite ends of the coil, an arrangement well adapted for general service conditions, including switchboard mounting. The 3-wire type "K" transformer is designed for use with watthour meters on 3-wire distribution systems. The primary consists of three separate windings, one of which is connected in each outside wire of the 3-wire system, and the secondary winding is connected to the watthour meter. When so connected the watthour meter measures the total output of the system. The ampere rating refers to the current in the outside wires.

New Principle Applied to Electric Fan and Exhauster.

Through the employment of a new operating principle the "Four Leaf Clover" fan made by the Centrifugal Fan Co., 7 Seventeenth avenue, Newark, N. J., created a centrifugal force which draws a swiftly moving volume of air into the blade unit and discharges it along the plane of rotation.

Thus the action of the "Four Leaf Clover" ceiling fan is the reverse of that of ordinary paddle design and instead of blowing down the hot air from the upper portion of the room, fresh, cool air from the lower part of the room is drawn up and distributed horizontally along the plane of the blades. Hence a greater cooling effect is obtained without unnatural drafts and in offices it is not necessary to weigh down papers, etc., upon desks.

The double blades are made of thin sheet metal, suitably decorated and equipped with standard castings, so as to be interchangeable with the blades of any standard type of fan motor.

Fresh air and light are essential for good health and the correct ventilating equipment should produce the former desirable condition by removing all contaminated air, disagreeable cooking odors and smoke from kitchens. The "Four Leaf Clover" window exhauster, which can be installed in either the center or corner of upper sash, or in separate panel above the window, will exhaust 5000 cu. ft. of air per hr. with a power consumption of about 30 watts. It is quietly driven by a standard motor and since all parts, except the motor, are made of aluminum, its total weight is only 5 lbs. Also the opening and closing device, with which it is equipped, automatically closes the opening when the fan is not running and prevents annoying drafts entering.

Features of "Marathon O. K." Ventilating Fan.

The "Marathon O. K." ventilating fan has recently been placed on the market by the Marathon Electric Manufacturing Co., Wausau, Wis. It is stated that this device is efficient at all speeds, and the motor or fan need not be stopped in order to change the speeds. The frame consists of a 1-piece casting which supports the entire equipment and insures rigidity for the propeller and motor. The motor is attached to a hinged base by means of bolts, and it is stated that this construction keeps the motor away from the current of dust-laden air.

The fan propeller consists of six blades, accurately balanced and designed with a special pitch that allows it to operate inclosed in a tube with practically the same output (cubic feet of air) as in the open air.

The motor is of small size, light weight and high speed, and will come up to speed at once with the fan gradually following. This prevents the burning out of starting windings on single-phase types and also eliminates the heavy starting current on the 2- and 3-phase and d-c. types.

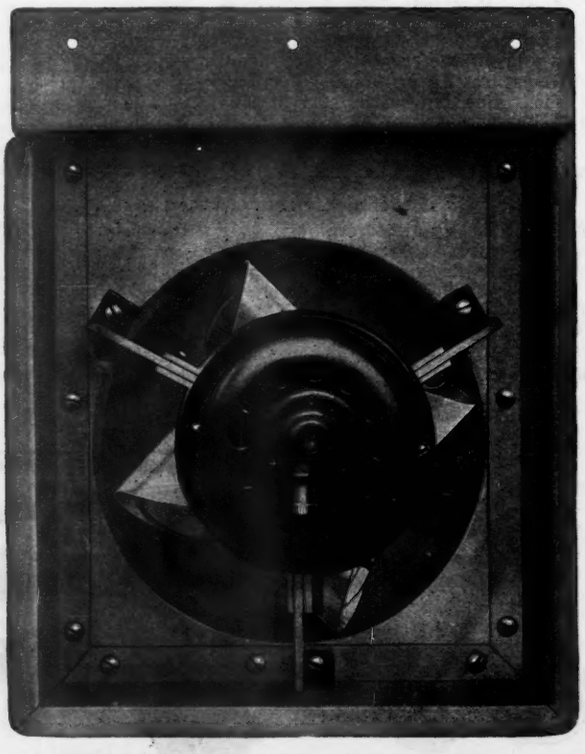
Alternating-current motors are furnished for either 110 or 220 volts, 1, 2 or 3-phase; 440 to 600 volts, 2 and 3-phase; 110 and 220 volts, 25 to 40 cycles, single-phase; direct current, 32, 110 and 220 volts.

Generating Unit for Direct Lighting and Battery Charging.

The Kewanee Private Utilities Co., Kewanee, Ill., has recently placed on the market a generating set adaptable for both direct lighting and battery charging. A 15-hp. automobile-type engine is attached to a generator of standard voltages in capacities from 3 to 7.5 kw. In the direct-lighting type the switchboard is mounted on the generator frame. The gasoline supply is contained in the base of the unit, feed being by means of a Stewart-Warner vacuum tank.

The manufacturer states that these engines are perfectly balanced and volume governed, insuring close speed regulation and adapting them particularly for direct-lighting purposes

"Four Leaf Clover" Ceiling Fan.



"Four Leaf Clover" Window Exhauster.

ACTIVITIES IN THE TRADE

Business Developments, Sales Agencies, Trade Literature and Miscellaneous Items Concerning Electrical Manufacturers and Allied Business Interests

Auto Farm Light Co., Indianapolis, has filed notice of dissolution under state laws.

Becker Electrical Appliance Co., Buffalo, N. Y., has filed notice of dissolution under state laws.

Kempler-Karasik Electric Co., 222 West 28th street, New York City, has filed notice of dissolution under state laws.

W. V. Pangborne & Co., Philadelphia, electrical contractors, have filed plans for the erection of an addition to their plant at 1827-29 West Montgomery avenue.

C. W. Kalb Electric Co., 165 William street, New York City, manufacturer of electrical specialties, has filed notice of increase in its capital stock from $10,000 to $50,000.

Multiple Storage Battery Co., Van Wyck avenue, Jamaica, L. I., N. Y., has filed plans for the erection of its proposed 1-story factory addition, 60 by 120 ft., estimated to cost $55,000. It will be equipped for general battery manufacture.

LaBelle Manufacturing Co., Indianapolis, which was recently organized with a capital of $250,000 to manufacture an electrically-driven washing machine, has elected the following officers: President, J. F. Scott; vice-president, H. R. Victor, and secretary-treasurer, C. S. Walker.

Ajax Electric Specialty Co., 1011 Market street, St. Louis, has announced that A. Hall Berry, 71 Murray street, New York City, is its exclusive sales representative for the following territory: Pennsylvania, New York, Maryland, District of Columbia, Connecticut, Rhode Island, Massachusetts, Vermont, New Hampshire, Maine, Delaware and New Jersey.

National Chain Co., College Point, L. I., N. Y., is removing its factory and offices from that location to its new quarters at Belleville, N. J. The company has announced that its manufacturing operations are necessarily disrupted at the present time on account of this removal and deliveries will be temporarily held up. It is expected that the company will be installed in its new quarters and ready to operate about the middle of September. All correspondence should be addressed to the company at Belleville, N. J.

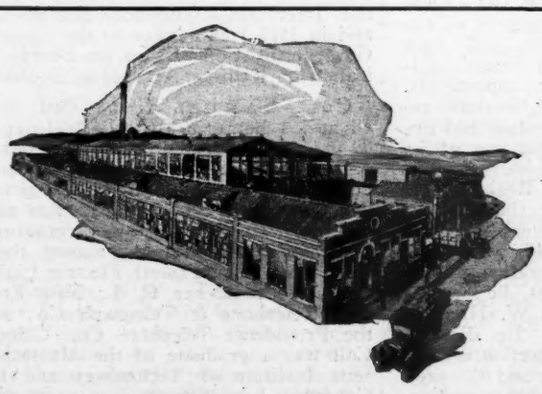
Westinghouse Electric & Manufacturing Co., East Pittsburgh, Pa., has prepared an interesting 16-page booklet entitled "Operating History of Westinghouse Turbine Units of 30,000 Kw. and Higher." The details given of troubles encountered and methods of meeting them, operating records, etc., should make the book valuable to those engaged in the electrical industry.

Ansonia Electrical Co., Ansonia, Conn., plans to build a large 1-story powerhouse in connection with the erection of a large addition to its electrical goods manufacturing plant, consisting of three 1-story buildings, totaling about 45,000 sq. ft. of space. It is proposed to double the plant capacity. The Aberthaw Construction Co., Boston, has the contract for the buildings.

Continental Electric Co., Ltd., 507 King street, East, Toronto, Ont., will manufacture the "Royal" electric cleaners. This company, newly organized and entirely separate from the P. A. Geier Co., Cleveland, which makes the "Royal" cleaners in the United States, is just getting into production and will shortly be in a position to supply the Canadian demand for this product.

S. R. Fralick & Co., 15 South Clinton street, Chicago, manufacturers and distributers of the "Kwikon" line of wiring devices and conduit fittings have issued catalog No. 21 and illustrated price list of their products. The catalog is composed of five separate bulletins, each of which is self-contained and covers a certain classification of materials. In this way the Fralick people feel that they have obtained loose-leaf flexibility without the trouble and confusion of single sheets. These bulletins, which are the regulation 8.5 by 10-in. size, may be had either with or without the heavy loose-leaf binder. In this form they are particularly intended for use by the jobbing trade. In addition the five bulletins are to be published in a smaller self-contained complete catalog which will be intended especially for use by the contracting trade.

P. A. Geier Co., Cleveland, manufacturer of "Royal" electric cleaners, has issued a new cleaner booklet entitled "By Air-Alone," which is filled with useful hints for the housewife on the whys and wherefores of electric cleaning. Obviously it was planned with a view to practical use by "household engineers." Apparently, too, the publisher considers that the time of the busy housekeeper is no less valuable than the time of the busy business man, for the information is given largely in the form of pictures, which offer "easy to read" pointers on the value of the electric cleaner in the home. Borrowing a successful idea from the "movies," The P. A. Geier Co., has therefore made a handsome series of "close-up" pictures of the cleaning process the outstanding feature of the book. They give the housewife the essential characteristics of the "Royal" cleaner at a glance. On one page the strong suction of the cleaner is demonstrated, on another the easy adjustment of the "Royal" nozzle to suit floor coverings of any thickness. The simple turn of the latch necessary in attaching the hose is shown, and the removal of the dust bag is illustrated. A clever "X-ray" view, included specially for friend husband's benefit, shows the simplicity of the internal mechanism. It is stated that the comparatively few parts of the cleaner, free from accessory mechanism which would be likely to clog the air passage or cause the cleaner to get "out of order," have been designed as the result of long years of constant endeavor to improve the "Royal." The P. A. Geier Co. has grown, in the 16 years of its existence, from a small beginning in a machine shop, to a half-million dollar corporation. Throughout this period of development the engineers who centered their attention upon the cleaner have worked consistently to simplify its construction. Emphasis is placed upon the comfort and convenience which falls to the lot of the housewife as a result of this evolution. Attractive photographs show the "Royal" in actual service in the household, taking up crumbs under the dining table, cleaning the finest Wilton in the home and the concrete floor of the basement as well, and, by aid of the attachments, cleaning out dresser drawers and whisking dust from lamp shades. The same air stream, gentle yet powerful, which cleans and prolongs life of fine floor fabrics, is also shown to be capable of removing dust and dirt from bare surfaces.



New Factory and Offices of National Chain Co., Belleville, N. J.

PERSONAL MENTION

Biographical Sketches and Chronicle of Changes in Business Connections, Promotions and Other Personal News of the Industry

HARRY G. STEWART and S. C. MILLER have joined the sales force of H. M. Byllesby & Co., Chicago.

M. M. KOCH, formerly field engineer with Henry L. Doherty & Co., New York City, has accepted a position with the Denver Gas & Electric Light Co., Denver, Colo.

ARCH ROBISON, formerly construction superintendent with the J. G. White Engineering Corp., Marcus Hook, Pa., is now with the Southern Utilities Co., West Palm Beach, Fla.

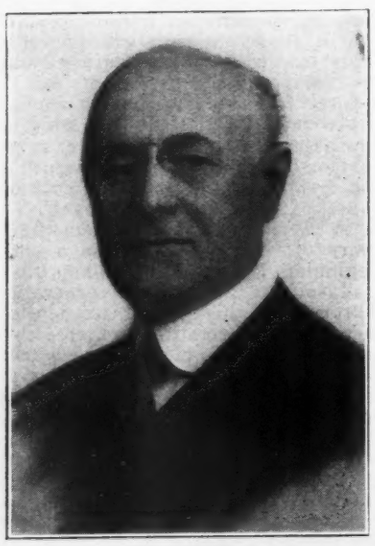
R. A. GLADWELL, who has been associated with the General Electric Co. since 1919, has left for Rugby, England, where he will be connected with the British Thomson-Houston Co.

VICTOR T. MAVITY is now electrical engineer with the Chaparra Sugar Co., Chaparra, Oriente, Cuba. He was previously with the Colonial Sugar Co. of Central Constancia, Cienfuegos, Cuba.

FREDERICK F. SHARPLESS has been elected secretary of the American Institute of Mining and Metallurgical Engineers, 29 West 39th street, New York City, to succeed Bradley Stoughton.

GLEN D. BAGLEY, who was formerly connected with the Electric Metallurgical Co., Niagara Falls, N. Y., has become associated with the Union Carbide and Carbon Research Laboratory, Inc., Long Island City, N. Y.

SAMUEL ADAMS CHASE, of New York City, special representative of the Westinghouse Electric & Manufacturing Co., left Aug. 12 for an extensive trip. The itinerary included boat to Halifax, Nova Scotia, then Quebec, Montreal and Toronto, "get-together" meetings being held at each place. From Canada plans were laid to attend the meetings of the Michigan Electric Light Association and the Michigan Electrical League at Ottawa Beach, Mich., and a meeting of the Detroit Electrical League at Detroit, and later a meeting of the Executive Committee of the Lighting Fixture Dealers' Society of America at Buffalo.



Samuel Adams Chase.

BRADLEY STOUGHTON, 20 West 39th street, New York City, for over 8 yrs. secretary of the American Institute of Mining and Metallurgical Engineers, has resigned to resume his practice as a consulting engineer.

FREDERICK R. MILLER has been appointed a member of the Ontario Hydroelectric Power Commission to succeed I. B. Lucas. Mr. Miller is a civil engineer and a member of the firm of Roger Miller & Sons, Toronto, Ont.

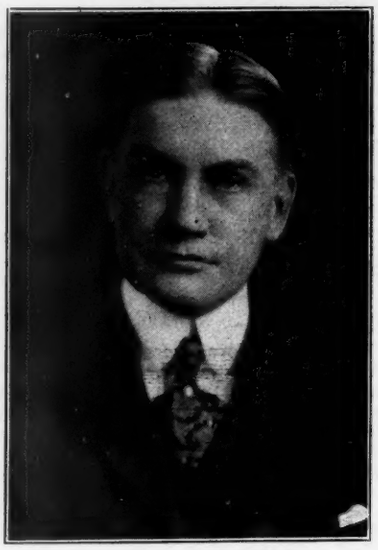
CHARLES V. MCINTYRE has resigned as chief engineer of the International Coal Products Corp., South Clinchford, Va., to become a consulting engineer in association with A. Stephen Knowles, 66 Broadway, New York City.

PETER COOPER HEWITT, 18 East 33d street, New York City, was operated on recently at the American Hospital, Neuilly, France, and according to latest advices his condition is satisfactory. He is a member of the American Institute of Electrical Engineers and is well known in the electrical industry as the inventor of the Cooper Hewitt mercury vapor arc lamp.

ROBERT L. WARE, formerly advertising and sales manager of the Smith Signal Corp. of New York, joined the publicity and service department of The Society for Electrical Development, Inc., 522 Fifth avenue, New York City, Aug. 15. Mr. Ware brings to the Society the benefit of a broad experience in advertising and sales stimulation work, having been assistant manufacturing manager of the Century Co., manager of the Meridian Press, assistant advertising manager of the Inter-Church World Movement, and vice-president of the Automobile Signal Association of North America.

OBITUARY.

WILLIAM COLIN ROBINSON, vice-president and chief engineer of the Underwriters' Laboratories, 207 East Ohio street, Chicago, died recently following an operation for appendicitis. He was 53 yrs. of age and his death removed from the fire protection and fire prevention engineering field one of its strongest men. Mr. Robinson was a Cornell University man. Beginning as a sprinkler inspector for the Chicago Board of Fire Underwriters some 28 yrs. ago he continued in this work until in 1901, with the incorporation of the Underwriters' Laboratories, he became associated with President W. H. Merrill and that institution. He directed special interest to the protection department of the Laboratories, and the high reputation for the thoroughness and accuracy of the engineering accomplishments of that institution is largely due to his painstaking labors and unusual ability. Among engineering and other organizations in which Mr. Robinson was active are the Western Society of Engineers, of which he had been a member since Dec. 15, 1906, and the National Fire Protection Association, to which he belonged for 25 yrs., being vice-president at the time of his death.



William C. Robinson.

WILLIAM W. LIGHTHIPE, manager of the general service department of the Otis Elevator Co., died at the Long Island College Hospital, Aug. 7, at the age of 44 yrs. He was a member of the American Institute of Electrical Engineers, the American Society of Mechanical Engineers and other organizations.

PROF. HENRY C. ADAMS, widely known economist and for over 30 yrs. head of the Department of Political Economy at the University of Michigan, died at his home in Ann Arbor, Mich., Aug. 11, at the age of 70 yrs. For many years he was statistician of the Interstate Commerce Commission and in 1913 was adviser to the Chinese Government Commission on Standardization of Railway Accounting Systems.

COL. SAMUEL COLT died Aug. 13 at his home in Bristol, R. I., aged 69 yrs. He was chairman of the board of the United States Rubber Co., which he founded and of which he was president from 1901 to 1918, and was also a director in about 40 other companies and banking institutions, among them being the Narrangansett Electric Lighting Co., Providence, R. I.; New England Telephone & Telegraph Co., and the Providence Telephone Co. Colonel Colt was a graduate of the Massachusetts Institute of Technology and the Columbia Law School.

BUSINESS OPPORTUNITIES

News of Electrical Construction Projects in All Parts of the Country, Proposals Invited, Foreign Trade Openings and New Companies

EASTERN STATES.

Concord, N. H.—Considerable electrical equipment will be installed in the 4-story printing plant to be erected by the Rumford Printing Co. on Ferry street.

Boston, Mass.—The Bureau of Yards and Docks, Navy Department, Washington, D. C., has completed plans for extensions and improvements in its power house at the navy yard here. The work will include the installation of new mechanical equipment.

Boston, Mass.—Electrical and mechanical equipment will be installed in the plant addition to be erected by the Royal Curtain Manufacturing Co., 283 Hyde Park avenue, estimated to cost $34,000.

Everett, Mass.—The Malden Electric Co. has awarded a contract to C. H. Tenney & Co., 201 Devonshire street, Boston, for the erection of its proposed local substation at Broadway and Oakland avenue, estimated to cost $65,000.

Hartford, Conn.—Electric motors, controlling devices and other electrical equipment will be installed in the proposed printing plant to be erected by Case, Lockwood & Brainerd Co., 141 Pearl street. Lockwood, Greene & Co., Boston, are architects.

New Haven, Conn.—Considerable electrical equipment will be installed in the laboratory building to be erected by the board of directors of Yale University, estimated to cost $1,500,000.

Batavia, N. Y.—The Genesee Light & Power Co. has received permission from the Public Service Commission for extensions in its transmission and distributing lines to furnish service at Attica and Stafford, in Wyoming and Genesee counties, respectively. Franchises granted by the local authorities have been approved.

Binghamton, N. Y.—The Binghamton Light, Heat & Power Co. will soon commence the construction of a transmission line from Endicott to Marathon, a distance of 27 mi. Rights of way have been secured and a stock issue sold to provide funds for the work. It is proposed to have the line ready for service before the close of the year.

Brooklyn, N. Y.—Considerable electrical and mechanical equipment will be installed in the 4-story baking plant to be erected by Cushman's Sons, Inc., 49 Manhattan avenue, New York City, at 1672-74 Atlantic avenue, Brooklyn. It will cost about $100,000.

Corinth, N. Y.—The Corinth Electric Light & Power Co. has received permission from the Public Service Commission to build an addition to its local electric power plant. The company will also make a number of extensions in its local distributing system.

Geneseo, N. Y.—The Mount Morris Illuminating Co., Mount Morris, N. Y., has inaugurated electric light and power service at Geneseo, following the shutdown of the local lighting plant of the Geneseo Light Co. The latter utility has discontinued electric service permanently.

Georgetown, N. Y.—The Georgetown Electric Light Co. has been granted permission by the Public Service Commission to extend its system and furnish service at towns near Georgetown, where service is now maintained.

Iona Island, N. Y.—The Bureau of Yards and Docks, Navy Department, has awarded a contract to the Lord Construction Co., 105 West 40th street, New York City, for the erection of an addition to the local government powerhouse, located at the ammunition depot.

New York, N. Y.—The United Electric Light & Power Co., 130 East 15th street, has completed plans for the construction of two coaling towers at its generating station on Walnut avenue, 133rd to 134th street, estimated to cost $200,000. Thomas E. Murray, Inc., 55 Duane street, is engineer.

New York, N. Y.—Considerable electrical and mechanical equipment will be installed in the 23-story office and bank building to be constructed by the Bank of America, 44 Wall street, estimated to cost $2,500,000. Tenney & Ohmes, 101 Park avenue, are consulting engineers for the electrical and steam installation.

New York, N. Y.—The Lackawanna Railroad Co., 90 West street, has rejected all bids recently received for electrical equipment for the electrification of a portion of its system in the anthracite coal district of Pennsylvania. New bids will be asked at a later date. Gibbs & Hill, Pennsylvania Terminal building, New York, are consulting engineers.

New York, N. Y.—Considerable electrical equipment will be installed in the 4-story tobacco manufacturing plant to be erected on avenue A and 71st street by the P. Lorillard Co., 119 West 40th street, estimated to cost $500,000.

Olean, N. Y.—The City Council may establish a municipal lighting plant. The present contract with the Olean Electric Light & Power Co. expires Feb. 1, 1922. Address the mayor.

Poughkeepsie, N. Y.—The Central Hudson Gas & Electric Co., 50 Market street, has made application to the Public Service Commission for permission to build an addition to its electric power plant.

Wappingers Falls, N. Y.—The Wappingers Electric Corp. has plans under way for the erection of an electric power plant to serve municipalities in certain sections of Dutchess county. Application for permission to construct the station has been made to the Public Service Commission.

East Orange, N. J.—The Public Service Electric Co. is arranging for the installation of poles on Main street, to be of combination type, used for a new lighting system and for trolley feed wires.

Newark, N. J.—Considerable electrical and mechanical equipment will be installed in the addition to be erected to the department store of L. Bamberger & Co., Market street, estimated to cost $1,500,000. Jarvis Hunt, 30 North Michigan avenue, Chicago, Ill., is architect; Martin C. Schwab, same address, is consulting engineer.

Newark, N. J.—The Passaic Valley Sewerage Commission, 130 Market street, has authorized the installation of new pumping plants at Wallington and Nutley, to be used in connection with the sewerage disposal system. Bids will be asked at an early date. J. Ralph Van Duyne is chief engineer for the Commission.

Newark, N. J.—Electrical equipment will be installed in the plant to be erected by the Mountain Ice Co. at 103 Newark street, plans for which have been filed.

Newark, N. J.—W. L. Glorieux, Jr., has filed plans for improvements at the power house at his factory at 90-92 Paris street.

Trenton, N. J.—State Purchasing Agent Edward E. Grosscup, is planning the installation of a refrigerating plant in the building recently acquired on Perrine avenue for state service.

Woodbury, N. J.—Considerable electrical equipment will be installed at the proposed municipal sewerage disposal plant to be constructed by the City Council, estimated to cost $60,000. W. H. Boardman, 426 Walnut street, Philadelphia, is engineer.

Wilmington, Del.—Electrically operated freight loading and unloading machinery, hoisting apparatus, etc., will be installed at the marine terminal to be constructed by the Board of Harbor Commissioners. Contract for the first unit has been awarded to the Du Pont Engineering Co., Du Pont building, Wilmington, at a cost of $1,372,570.

Allentown, Pa.—The Crowder, Jr., Co., 446-48 Union street, has received a contract for 57 new lighting standards to be installed on Hamilton street, from Second to Penn street; 12 lighting standards for installation on South Seventh street; and 16 standards to be installed on North Seventh street. The installation will be made by the Pennsylvania Power & Light Co., which furnishes service in this district.

Altoona, Pa.—The Blair County Electric Co. has been chartered under state laws, with nominal capital of $5,000, to operate an electric light and power system in this section. J. S. Thornton, 933 Liberty avenue, Pittsburgh, is treasurer.

Coopersburg, Pa.—The Coopersburg Electric Light, Heat & Power Co. is completing the construction of a power line from Coopersburg to Locust Valley, where a distributing system will be installed for local light and power service.

Fayetteville, Pa.—A new company, to be known as the Fayetteville Electric Light & Power Co., is being organized to furnish electric light and power service in this section. Application for a state charter will be made at an early date. The company is headed by I. S., H. G. and C. W. Sollenberger.

Harrisburg, Pa.—The City Council is having a contract prepared for lighting Ridley Park. It is understood that the agreement for service will be made with the Harrisburg Light & Power Co.

Philadelphia, Pa.—Considerable electrical equipment will be installed in the 10-story automobile manufacturing and service plant to be constructed by the Hurley Motor Co., Broad and Race streets, at 219 North Broad street, estimated cost $350,000.

Philadelphia, Pa.—A power house will be constructed by the Logan Baking Co., at its proposed baking plant in the Logan section. T. F. Miller, 1012 Walnut street, is engineer.

Pittsburgh, Pa.—The West Penn Power Co. has disposed of a bond issue of $3,000,000 for proposed extensions, betterments and general operation of power plants and systems.

Pittsburgh, Pa.—The United Light Electric Co. has entered into an agreement with the Pittsburgh Railways Co. for the installation of lamps on poles of the company in different sections, including feed lines, etc. Application has been made to the Public Service Commission for approval of the arrangement.

Uniontown, Pa.—The board of directors of the Uniontown Hospital will break ground at once for the erection of a power house at the institution, to be constructed in connection with a mechanical laundry plant, estimated to cost $40,000.

York, Pa.—Electric motors and other electrical equipment will be installed by the American Toy Desk Co., Glen Rock, near York, in connection with the rebuilding of its plant, recently destroyed by fire, with loss of about $50,000.

Annapolis, Md.—The Bureau of Yards and Docks, Navy Department, Washington, D. C., is taking bids up to Aug. 31, for the construction of an addition to the power plant at the local naval property. A new coal bunker will also be constructed at the plant.

Baltimore, Md.—Considerable electrical equipment will be installed in the grain elevator to be constructed at Port Covington by the Western Maryland Railway Co., estimated to cost $1,000,000. The plant will duplicate a present grain elevator of the company at this location.

Oxford, Md.—The board of commissioners has made application to the Public Service Commission for permission to construct and operate a municipal electric power plant. Bonds will be issued to defray the cost.

Winchester, Va.—The Northern Virginia Power Co. has completed the construction of 22,000-volt line to Winchester for local light and power service. The line is connected with the company's plant at Martinsburg, W. Va., and consists of six aluminum wires in steel cable.

Leevale, W. Va.—The Leevale Coal Co., Charleston, W. Va., is planning the installation of electric and other machinery at its coal properties at Leevale. A new tipple will be constructed. D. H. Morton is general manager.

Martinsburg, W. Va.—The Chesapeake & Potomac Telephone Co., will expend $5,125 for telephone exchange additions. It is also planned to merge the Cumberland Telephone Co., central office, with The Chesapeake & Potomac Co. Address R. W. Stake, local manager.

Shinnston, W. Va.—The Clay District Telephone Co. has been incorporated by W. J. Currey, E. W. Robbinson and Frank Shriver.

Lenoir, N. C.—The Caldwell Power Co. has been organized with a capital of $30,000 to install and operate an electric light and power system in this section. J. L. Nelson and J. H. Beall head the company.

Lexington, N. C.—The Town Council is planning a bond issue of $50,000 for extensions in the local electric system and for other municipal work.

Wilmington, N. C.—The Wilmington Cooperage Co. is planning the rebuilding of the portion of its power house, recently damaged by fire.

Greenwood, S. C.—The Greenwood Radio Club, of which George Cothran is president, plans to install wireless equipment in the community hall.

Atlanta, Ga.—Considerable electrical equipment will be installed in the additions to be constructed by the Atlantic Ice & Coal Corp. at its different ice and refrigerating plants. The work is estimated to cost $700,000.

Forsyth, Ga.—Fire, caused by lightning, destroyed a portion of the local plant and equipment of the Central Georgia Power Co., recently. The damage will be replaced.

Merritt, Fla.—The Merritt Island Light & Power Co. has been chartered under state laws to install and operate a local light and power system. O. R. Grosse is president, and A. A. Buck, secretary and treasurer.

Tampa, Fla.—Considerable electrical equipment will be installed in the brick and tile manufacturing plant to be erected by Florida N-Tex Brick & Tile Co., recently organized with a capital of $200,000. W. B. Coarsey is president and general manager.

Wauchula, Fla.—The Hardee County Power & Ice Co., recently organized with a capital of $200,000, is planning the establishment of electric power plant. J. G. Fancy, Fort Meade, Fla., is president.

Webster, Fla.—The Town Council has approved plans for the construction of a power line to Bushnell, Fla., where connection will be made for electric service at Webster. A local distributing line will also be constructed.

NORTH CENTRAL STATES.

Ravena, Mich.—The Ravena Conklin Electric Light & Power Co. is taking bids for the construction of its proposed local hydroelectric power plant, estimated to cost $85,000. Holland, Akerman & Holland, 106 Liberty avenue, Ann Arbor, Mich., are engineers.

Union City, Mich.—Engineers Holland, Akerman & Holland, 106 East Liberty street, Ann Arbor, Mich., have prepared estimates for a hydroelectric power plant. The sum of $150,000 will be expended. Address John L. Moore, president of the Village Council, Union City, Mich.

Clinton, Ind.—The local telephone company will expend $60,000 in improving the telephone system. The telephone wires will be placed in cables. Address Manager Nolte, or H. R. Sanders, clerk of board.

Evansville, Ind.—The Evansville Gas & Electric Co. has arranged a stock issue and plans are being developed for sales to local consumers. The proceeds will be used for extensions, improvements, operations, etc. Frank J. Haas is vice-president and general manager.

Indianapolis, Ind.—The Active Coal Co., 607 Board of Trade building, has plans under way for the construction of a coal handling plant at Fourteenth and Senate streets, estimated to cost $50,000.

Terre Haute, Ind.—The Indiana Electric Corp., which includes seven large electric companies, has been incorporated by Joseph H. Brewer, of Grand Rapids, Mich., president of the American Public Utilities Co., which operates the Merchants Heat & Light Co., of Indianapolis, and other utility corporations. As a result of the merger the plant proposes to supply electricity from a central power station to be located in the coalfields north of Terre Haute.

Bloomington, Ill.—The Kinlock Telephone Co. has been granted a franchise to lay a conduit in Olive street.

Marshall, Ill.—The council has engaged a supervising engineer to care for the construction of a new lighting plant. He also is to furnish a preliminary estimate of the cost upon which to base a bond issue. He will also make an invoice of the Hallauer plant to determine whether it would be advisable to buy it, rather than to build a new one. Address the mayor.

Springfield, Ill.—The Springfield Boiler Co. has secured the contracts for furnishing a 525-hp. boiler, price $12,500, for the municipal electric light plant. The Maloney Electric Co.'s proposal of $11,796 for transformers was also accepted, as was the Illinois Stoker Co. offer of $4,407 for stokers. Bids for a smokestack, 145 ft. in height, 6 ft. in width, to be built

of steel, will be opened Aug. 29. A condenser will also be purchased.

Springfield, Ill.—Bids were received Aug. 22 for the following improvements: Installing of electric street lighting system on certain portions of Woodlawn aveune, Vine street, State street, Glenwood avenue and Walnut street. Address Charles T. Baumann, Board of Local Improvements.

Atwater, Minn.—An electric line will be extended from Litchfield here and on to Grave City, for the owner of the Atwater Light & Power Co.

Duluth, Minn.—The City Commissioners are planning to install lamps for a "white way" on Grand avenue from 59th avenue west to Central avenue, on Central avenue from Grand avenue to Roosevelt street, and on Ramsey street from 54th avenue west to Grand avenue. Address P. G. Phillips, commissioner.

Sleepy Eye, Minn.—The City Council received bids Aug. 26 for the furnishing and complete installation of a 350 kv-a. engine generator equipment in accordance with plans and specifications on file in the city recorder's office.

Pilot Grove, Ia.—A new company, capitalized at $12,000, formed for the purpose of furnishing electric power for the farmers living between West Point, Pilot Grove and St. Paul, was launched at a meeting of 38 stockholders held at St. Paul. The company will get its power from West Point and work on the construction of the line and the installation of service will be started as soon as materials can be secured. Address John Hellman, treasurer, Pilot Grove, Ia.

Jefferson City, Mo.—The Commissioners of the State Capitol, after examining three bids for supplying the building with electric lamps, will advertise for bids for supplying every building owned by the state requiring artificial light.

Joplin, Mo.—The Home Telephone Co. is planning extensions and improvements in its plant and system to cost about $30 000.

Kansas City, Mo.—Merger plans have been perfected by the United Light & Power Co., Abilene, Kan., and the Pawnee Power & Water Co., Larned, Kan. The new company will be known as the United Light & Power Systems, Inc. A total of 15 electric generating plants will be operated by the consolidated company, with service rendered to over 100 towns and 26 counties in the state. Plans for a number of extensions and improvements are now under way, including power station work, and distributing lines. The company's present installation is valued at $13,000,000.

Dexter, Kan.—Bonds to the amount of $26,000 have been voted for electric light and power services to be purchased from the municipal plant at Winfield. Address W. R. Coffee, mayor.

West Point, Neb.—The sum of $58,000 will be expended for improving the electric light system. Bids will be received Sept. 1. Koening & Hollister, 401 Bankers' Life building, Lincoln, Neb., are the engineers. Address Sarah Lindale, city clerk.

Bathgate, N. D.—The Citizens' Telephone Co. will extend its farm lines in this vicinity.

Casselton, N. D.—The General Utilities Corp. decided to erect a high power line from Fargo for light and power. The work on setting poles will be started soon.

Fargo, N. D.—A single lighting system has been recommended for the city instead of a cluster unit by the city engineer, Robert T. Jacobsen, on Broadway from Sixth avenue, north to Twelfth avenue, north on First, Second, Third and Fourth avenues, and north on Third, Fourth and Fifth streets. Address N. A. R. Watkins, city clerk.

SOUTH CENTRAL STATES.

Anniston, Ala.—The Southern Bell Telephone Co. will expend $55,000 to enlarge its system.

Hartsells, Ala.—Ernest Lynn and associates are organizing a new company to construct and operate a hydroelectric power plant in this section. The initial plant is estimated to cost $100,000.

Tulsa, Okla.—The Southwestern Bell Telephone Co. will expend $265,000 on plant improvements, installing 3 mi. of 1,200-pair underground cable and additional equipment. Address George F. Bell, local manager.

Dallas, Tex.—The Texas Electric Railway Co. has filed notice of increase in its capital stock from $10,000,000 to $12,000,000 for proposed extensions and improvements and general operations.

WESTERN STATES.

Centralia, Wash.—Bids were received Aug. 27 by Miss Mabel Lee, city clerk, for the construction of the plant and office building to be erected for the municipal light department at the corner of Pearl and Maple streets at an estimated cost of $70,000. Plans were prepared by Wohleb & Stanley, architects.

Orizaba, Mexico—It is planned by S. Pearson & Son, Ltd., the British firm of contractors and oil operators of which Lord Cowdray is the head to enlarge its hydroelectric plant near here. It is stated that about 50,000 hp. will be added to the plant and that transmission lines will be extended to a number of towns and industrial centers now reached by its transmission system. At present the string of cotton mills near Orizaba, as well as this city, Puebla and other towns are supplied with electric lights and power from the plant. S. Pearson & Son, Ltd., also own the electric light and power plants in Vera Cruz and Tampico, as well as the street-railway systems in those two cities.

INCORPORATIONS.

Wilmington, Del.—Jondee Electric Co. Capital $100,000. To operate an electrical contracting business. Local incorporators: S. E. Dill, M. A. Bruce and C. H. Maxwell.

New Albany, Ind.—Tri-City Electric Co. Capital $5,000. To deal in electrical equipment and supplies. Incorporators: M. M. Broida, F. A. Hendrix and L. S. Broida.

Chicago, Ill.—Utility Battery Co. of America. Incorporated in Delaware, capital $5,000,000. To manufacture electric batteries. Incorporators: T. C. Frederick, Chicago; Marion Luce, Oak Park, Ill.; and H. L. Wuerffel, Mount Prospect, Ill.

New York, N. Y.—Middle State Electric Co. Capital, $5,000. To manufacture electrical products. Incorporators: J. Mittleman, M. Eisenstadt and A. Zahn. The company is represented by Barondess & Chaitin, 27 Cedar street.

Charleston, W. Va.—Schoolfield-Harvey Electric Co. Capital, $10,000. To manufacture electrical supplies. Incorporators: Raymond R. and G. C. Schoolfield and Leonard P. Harvey.

Joliet, Ill.—Home Wiring Co., 409 East Jefferson street. Capital $35,000. To manufacture and deal in electrical appliances and fixtures. Incorporators: Earl L. Rohm and Harry C. Norris.

Superior, Wis. — Benson Electric Co., incorporated in Delaware with capital of $1,000,000. To operate as electrical contractors. Incorporators: Melville B. Benson, Arthur W. Highfield and Horatio V. Gard.

New York, N. Y.—Mooney, Douglas & Pearson, Inc. Capital, $100,000. To manufacture electrical equipment. E. I. Cullen, 250 Ninety-third street, Brooklyn, is the principal incorporator.

Brooklyn, N. Y.—Empire Electric Globe Co. Capital, $10,000. To manufacture electrical specialties. Incorporators: S. R. Goldstein, L. Feldman and M. L. Kane, 50 Court street.

Eldridge, N. Y.—Doman Manufacturing Corp. Capital, $200,000. To operate as electrical engineers. Incorporators: W. H. Fleisch, A. E. Doman and F. E. MacCollum. The company is represented by Stilwells, Viall & Sterritt, attorneys, Syracuse, N. Y.

Newark, N. J.—Eagle Electrical Supply Co. Capital, $20,000. To manufacture electrical specialties. Incorporators: Joseph P. Klesinger and Joseph H. Grabowski, 695 Summit avenue, Jersey City.
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FOREIGN TRADE.

[Addresses of firms referred to in these trade opportunities may be obtained by writing to the Bureau of Foreign and Domestic Commerce, Washington, D. C., or its branch and local co-operative offices. Request for each opportunity should be on a separate sheet and the file number given.]

Electrical Fittings (35,308)—A commercial agent in England desires to secure the representation of firms for the sale of electrical fittings, cables, etc. Quotations should be given c. i. f. London or f. o. b. New York City. Reference.

Motor-Driven Refrigerators (35,315)—An inquiry has been received from England for catalogs and price lists, in duplicate, of domestic motor-driven refrigerators or ice boxes.

FINANCIAL NEWS

Comment on the Financial Outlook in the Electrical Industry, New Securities, Reports of Earnings, Dividends and Utility Stocks

Offering of West Penn Power Co. Gold Bonds.

Halsey, Stuart & Co. and A. B. Leach & Co., Chicago, are offering an issue of $3,000,000 West Penn Power Co. first mortgage 7 per cent gold bonds, series "D," due March 1, 1946, in denominations of $1000, $500 and $100, at a price of 98.25 and interest, yielding 7.15 per cent. The West Penn Power Co. supplies electricity for light, heat and power purposes in 194 cities, towns and communities located in the Pittsburgh district of Pennsylvania, at distances of from three to sixty miles from that city. The population of all communities served is in excess of 500,000, while the chartered territory exceeds 4600 square miles.

Gross earnings of the company for the 12 months ended June 30, 1921, were $9,320,331. During the same period the net earnings amounted to $3,246,028, as compared with annual interest requirements on the outstanding first mortgage bonds (including the present issue) of $1,164,080.

Western Union Telegraph Co. to Issue Gold Bonds.

A special meeting of stockholders of the Western Union Telegraph Co. has been called for Sept. 8 to increase the bonded indebtedness of the company by $15,000,000, through the issuance of 6½% gold bonds to mature Aug. 1, 1936. Proceeds will be used to reimburse the treasury for expenditures made for improvements.

Mississippi River Power Co.

For June—	1921.	1920.
Gross earnings	$ 221,700	$ 232,181
Net earnings	164,121	180,861
Surplus after charges	59,667	81,546
For 12 mo. ended June 30—		
Gross earnings	$2,821,167	$2,585,267
Net earnings	2,116,031	2,039,051
Surplus after charges	888,828	821,868

General Gas & Electric Co.'s Subsidiary.

	1921.	1920.
June gross	$898,822	$869,916
Net after taxes	226,541	141,878

Winnipeg Electric Railway Co.

	1921.	1920.
June gross	$ 446,209	$ 407,625
Net earnings	118,734	118,602
6 mo. gross	2,856,715	2,645,742
Net earnings	710,105	710,721

Utah Securities Corp. Subsidiaries.

	1921.	1920.
June gross	$ 667,910	$ 638,816
Net earnings	294,486	257,576
12 mo. gross	8,787,397	7,905,831
Net earnings	4,164,783	3,860,259

North American Light & Power Co.

	1921.	1920.
June gross	$3,373,489	$2,376,185
Net after taxes	831,512	673,503
Surplus after charges	363,728	115,028
Balance after preferred dividends	218,726	65,275

American Power & Light Co. Subsidiaries.

	1921.	1920.
June gross	$ 1,875,209	$ 1,598,345
Net after taxes	659,001	502,180
12 mo. gross	24,269,678	18,486,261
Net after taxes	8,001,871	6,966,802

Northern Texas Electric Co.

	1921.	1920.
June gross	$ 287,091	$ 331,492
Net earnings	98,616	120,723
Surplus after charges	73,244	95 860
12 mo. gross	3,892.281	3,740.603
Net earnings	1.349.854	1.459.761
Surplus after charges	1,046.850	1.161.400

Southwestern Power & Light Co. Subsidiaries.

	1921.	1920.
June gross	$ 754,828	$ 678,272
Net earnings	316,740	220.019
12 mo. gross	10,172,235	7,435,749
Net earnings	3,729,412	2,997,434

Detroit Edison Co. and Subsidiaries.

	1920.	1919.
June gross	$ 1,728,216	$ 1,807,803
Net earnings	406,453	204,270
Surplus after interest charges	123,180	11,838
6 mo. gross	11,624,400	10,309,002
Net earnings	3,065,792	2,142,894
Surplus after interest charges	1,420,019	1,065,950

Pacific Gas & Electric Co.

	1921.	1920.
June gross	$3,227,064	$2,753,991
Net after taxes	1,251,145	918,835
Surplus after fixed charges	735,579	465,723
Balance after preferred dividends	270.886	83,326
6 mo. gross	19,367.796	16,374,736
Net after taxes	7,259,818	5,801,228
Surplus after fixed charges	4,219,877	3,313,512
Balance after preferred dividends	1,455,685	1,021,599

Utah Securities Corp.

Income account for the year ended Dec. 31, 1920, of the Utah Securities Corp. (including undistributed earnings of its subsidiary, Utah Power & Light Co. and subsidiaries of the latter company) shows combined net income of $49,339, against $111,674 in the previous year. Consolidated income account for the year 1920 compares as follows:

	1920.	1919.
*Gross	$726,192	$764,664
Expenses, tax and interest of Utah Securities Corp.	180,533	156,670
Balance	545,659	607,994
Interest	496,320	496,320
Combined net increase	49,339	111,674

*Includes undistributed earnings of subsidiary companies.

Nevada-California Electric Corp. and Subsidiaries.

	1921.	1920.
June gross	$ 348,316	$ 360,411
Net after taxes	166,553	171,728
Total income	165,975	170,794
Surplus after charges	52,923	76,253
12 mo. gross	3,142,027	2,841,991
Net after taxes	1,692,186	1,475,570
Total income	1,684,144	1,466,577
Surplus after charges	388,494	387,942

Puget Sound Power & Light Co.

	1921.	1920.
June gross	$ 751,871	$ 735,578
Net earnings	267,587	263,696
Surplus after charges	123,626	106,339
12 mo. gross	10,203,194	9,482,548
Net earnings	4,260,461	3,875,678
Surplus after charges	2,391,169	2,049,289

Galveston-Houston Electric Co.

	1921.	1920.
June gross	$ 321,689	$ 325,156
Net earnings	94,742	99,440
Surplus after charges	59,015	64,148
12 mo. gross	3,927,858	3,385,329
Net earnings	1,124,607	914,480
Surplus after charges	700,298	492,496

Alabama Power Co.

	1921.	1920.
June gross	$ 351,253	$ 335,612
Net after taxes	186,034	185,995
12 mo. gross	4,472,575	3,538,904
Net after taxes	2,251,617	1,897,799

Dividends.

	Term.	Rate.	Payable
Cities Service, com. stock scrip.	M.	1.25%	Oct. 1
Cities Service, com. scrip.	M.	0.5 %	Oct. 1
Cities Service, pfd., scrip	M.	0.5 %	Oct. 1
Cities Service, pfd., B, scrip	M.	0.5 %	Oct. 1
Galveston-Houston El.	SA.	$3.00	Sept. 15
Neb. Power, pfd.	Q.	1.75%	Sept. 1
Nor. Ohio Trac., pfd.	Q.	1.5 %	Oct. 1
Pa. Wat. & Pr.	Q.	1.75%	Oct. 1
San Joaquin L. & Pr., pfd.	Q.	1.5 %	Sept. 15

WEEKLY COMPARISON OF CLOSING-BID PRICES OF SECURITIES OF LEADING ELECTRICAL COMPANIES.

Quotations furnished by F. M. Zeller & Co., Rookery Bldg., Chicago.

Public Utilities—	Div. rate. Per cent.	Bid Aug. 15	Bid Aug. 22
Adirondack Electric Power of Glenns Falls, common	6	9½	9¼
Adirondack Electric Power of Glenns Falls, preferred	6	69	69½
American Gas & Electric of New York, common	..	103	104
American Gas & Electric of New York, preferred	6	37	37½
American Light & Traction of New York, common	..	92½	93½
American Light & Traction of New York, preferred	6	79	78
American Power & Light of New York, common	4	57	55½
American Power & Light of New York, preferred	6	63	66
American Public Utilities of Grand Rapids, common	..	7	7
American Public Utilities of Grand Rapids, preferred	7	17	17
American Telephone & Telegraph of New York	..	105	105½
American Water Works & Elec. of New York, common	..	4	3½
American Water Works & Elec. of New York, particip.	7	8	7½
American Water Works & Elec. of New York, 1st preferred.	..	48	46
Appalachian Power, common	..	5	4
Appalachian Power, preferred	7	28	30
Cities Service of New York, common	+extra	115	112
Cities Service of New York, preferred	6	45	44
Commonwealth Edison of Chicago	8	109	109
Comm. Power, Railway & Light of Jackson, common	..	10	10½
Comm. Power, Railway & Light of Jackson, preferred	6	29½	28½
Federal Light & Traction of New York, common	..	7	6½
Federal Light & Traction of New York, preferred	..	42½	42
Northern States Power of Chicago, common	..	36	36
Northern States Power of Chicago, preferred	ex.div.7	79	79
Pacific Gas & Electric of San Francisco, common	..	55	55
Public Service of Northern Illinois, Chicago, common	7	78	80
Public Service of Northern Illinois, Chicago, preferred	6	80	80
Standard Gas & Electric of Chicago, common	..	8	8½
Standard Gas & Electric of Chicago, preferred	8	34	34½
Tennessee Railway, Light & Power of Chattanooga, common	..	1	¾
Tennessee Railway, Light & Power of Chattanooga, preferred	6	4	3½
Western Power of San Francisco, common	..	26	25½
Western Union Telegraph of New York	..	81	81⅞
Industrials—			
General Electric of Schenectady	8	114½	111¼
Westinghouse Electric & Mfg. of Pittsburgh, common	7	43½	40